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**DRAFT ENVIRONMENTAL IMPACT STATEMENT**  
**US NAVY F-35C WEST COAST HOMEBASING**

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**VOLUME I**  
**CHAPTERS 1 – 10**  
**FEBRUARY 2013**



**Prepared by:**  
**Department of the Navy**



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## Document Organization

VOLUME I	<b>ABSTRACT</b>
	<b>EXECUTIVE SUMMARY</b>
	<b>TABLE OF CONTENTS</b>
	<b>ACRONYMS AND ABBREVIATIONS</b>
	<b>CHAPTER 1</b> Introduction
	<b>CHAPTER 2</b> Proposed Action and Alternatives
	<b>CHAPTER 3</b> Resource Definitions, Regulatory Setting, and Approach to Analysis
	<b>CHAPTER 4</b> Alternative 1 – NAF El Centro Homebasing
	<b>CHAPTER 5</b> Alternative 2 – NAS Lemoore Homebasing
	<b>CHAPTER 6</b> Cumulative Impacts for Alternative 1 – NAF El Centro Homebasing
	<b>CHAPTER 7</b> Cumulative Impacts for Alternative 2 – NAS Lemoore Homebasing
VOLUME II	<b>CHAPTER 8</b> Other Considerations Required by NEPA
	<b>CHAPTER 9</b> References
	<b>CHAPTER 10</b> List of Preparers and Contributors
	<b>APPENDICES</b> A – Public Involvement B – F-35C Training Operations C – Noise D – Air Quality E – Land Use Compatibility F – Socioeconomics G – Traffic Study H – Cultural & Traditional Resources

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**Abstract**

The proposed action addressed in this Environmental Impact Statement (EIS) is to provide facilities and functions on the West Coast of the United States (US) to support homebasing F-35C aircraft in the Navy Pacific Fleet. The purpose of the proposed action is to replace aging Navy Pacific Fleet FA-18 aircraft with F-35C aircraft while meeting pilot training and readiness requirements.

Facility development needed to support F-35C homebasing may begin as early as 2015. Seven Pacific Fleet FA-18 squadrons (70 total aircraft) currently based at Naval Air Station (NAS) Lemoore would progressively transition to the new F-35C aircraft beginning in 2015 with the transition to be complete by 2028. The plan would also involve the establishment no earlier than 2017 of an F-35C Fleet Replacement Squadron consisting of approximately 30 F-35C aircraft to meet the requirements for training Navy pilots.

This EIS reviews and assesses two action alternatives and the No Action Alternative. The two installations that best meet Navy requirements for homebasing the F-35C on the West Coast are Naval Air Facility (NAF) El Centro and NAS Lemoore. Under the No Action Alternative, the Navy would not provide facilities and functions on the West Coast to support homebasing the F-35C in the Navy Pacific Fleet. Alternative 2, Homebasing the F-35C at NAS Lemoore, is the preferred alternative.

The environmental analysis in this EIS for the West Coast homebasing of the F-35C focuses on the facilities and functions of the proposed action: aircraft replacement and transition, facility and infrastructure requirements, personnel requirements, and aircraft operations in the airfield environment of NAF El Centro and NAS Lemoore and in Special Use Airspace within the vicinity of each installation. Environmental resource topics evaluated include: airfields and airspace, noise, air quality, safety, land use, infrastructure and utilities, socioeconomics, community services, ground traffic and transportation, biological resources, topography and soils, water resources, cultural and traditional resources, and hazardous materials and waste. This EIS has been prepared by the US Department of the Navy in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 *et seq.*); the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations Parts 1500-1508); and Department of the Navy Procedures for Implementing NEPA (32 Code of Federal Regulations 775).

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## **EXECUTIVE SUMMARY**

The United States Department of the Navy has prepared this Draft Environmental Impact Statement (EIS) to evaluate the potential environmental impacts that may result from providing facilities and functions on the West Coast of the United States (US) to support homebasing F-35C aircraft in the Navy Pacific Fleet. The F-35C Lightning II Joint Strike Fighter is a technologically advanced fifth-generation strike fighter designed to operate from conventional runways and nuclear-powered aircraft carriers. The F-35C is a single-engine aircraft, equipped with state-of-the art technology that makes it more difficult to detect on radar, and capable of greater communication with other airborne and ground-based units.

This EIS has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969; Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations Parts 1500-1508); and Procedures for Implementing NEPA (32 Code of Federal Regulations 775). The environmental analysis in this EIS for the West Coast Homebasing of the F-35C focuses on the facilities and functions of the proposed action: aircraft replacement and transition; facility and infrastructure renovation, construction, and demolition; personnel changes; and aircraft operations at proposed airfields and in Special Use Airspace (SUA) within the vicinity of the airfields.

The Navy intends to base all its West Coast F-35C at one location in order to maximize the efficiency of support facilities, simulation devices, and on-site support personnel. More than 100 Department of Defense airfields were examined in a three-level screening process to identify potentially suitable F-35C homebase locations. After reviewing the geographic considerations, airfield characteristics, and operational mission compatibility factors, the two installations that best met Navy requirements are Naval Air Facility (NAF) El Centro, Imperial County, California and Naval Air Station (NAS) Lemoore, Kings and Fresno counties, California. As a result, the two proposed action alternatives analyzed in this EIS for providing facilities and functions on the West Coast to support the homebasing of F-35C aircraft in the Navy Pacific Fleet are: Alternative 1 – NAF El Centro Homebasing and Alternative 2 – NAS Lemoore Homebasing.

### **ES.1 PURPOSE AND NEED**

The purpose of the proposed action is to replace aging Navy Pacific Fleet FA-18 aircraft with F-35C aircraft while meeting pilot training and readiness requirements. The F-35C is the congressionally approved long-term replacement for the Navy's aging FA-18 aircraft. The advanced features of the F-35C are designed to enable the Navy to succeed in fulfilling maritime capability missions in sophisticated air defense environments. As older models of the FA-18 are approaching the end of their service life, the Navy must replace them efficiently and expeditiously. To do so, the Navy intends to maximize the use of existing Navy installations, manpower, and support functions to the greatest extent possible.

### **ES.2 PROPOSED ACTION**

The proposed action is to provide facilities and functions on the West Coast of the United States to support homebasing F-35C aircraft in the Navy Pacific Fleet. Providing the facilities and functions of the proposed action is described below in terms of aircraft replacement and transition, facility and infrastructure requirements, personnel requirements, and aircraft operations.

Seven Pacific Fleet FA-18 fleet squadrons (operating 70 aircraft in total) currently based at NAS Lemoore would progressively transition to the new F-35C aircraft beginning in 2015 with the transition to be complete by 2028. The plan would also involve the establishment no earlier than 2017 of a Fleet Replacement Squadron (FRS) consisting of approximately 30 aircraft to meet the requirements for training Navy pilots to operate the F-35C.

Facility development needed to support F-35C homebasing may begin as early as 2015. The homebase location would require facilities and infrastructure for training, operations and maintenance, and personnel support. F-35C training for Navy pilots, instructors, administrators, and support personnel requires adequate space in a configuration that supports training in classrooms; independent study at interactive workstations; and training in flight simulators, on various aircraft component mock-ups, and on maintenance devices. F-35C operations and maintenance would require airfield pavement, aircraft maintenance hangars, supply and storage facilities, and adequate utilities to accommodate aircraft movement and parking, ordnance handling, aircraft maintenance/repair, and aircraft servicing, as well as secure spaces for pre- and post-mission activities. Other facilities, such as bachelor quarters, are needed to support Navy personnel.

The proposed action requires military, civilian, and contractor personnel to perform F-35C operational, maintenance, and training functions. The Navy would not need to add any additional personnel to its overall force structure to implement the proposed action. Instead, existing Navy personnel, most of whom are currently supporting aging FA-18 aircraft, would transition and potentially relocate to provide support for F-35C squadrons.

F-35C aircraft would conduct departure, arrival, and pattern operations at the selected homebase airfield. F-35C operations in SUA and Military Training Routes (MTRs) within the vicinity of the selected homebase airfield would include air combat maneuvers and training, air-to-air refueling, and basic fighter maneuvers. F-35C flight training operations would be very similar to existing FA-18 training in quality and quantity, using the same weapons. The Navy would use its existing training ranges and SUA in the same manner they are used currently.

### **ES.3 ALTERNATIVE 1 – NAF EL CENTRO HOMEBASING**

NAF El Centro is located in south-central California, approximately 7 miles northwest of the City of El Centro, in the Imperial Valley. Originally established in 1942, El Centro was commissioned as a Naval Air Facility in 1946. NAF El Centro has ideal flying weather throughout the year, which makes it an alternative training location for other Navy and Marine Corps aviation units when there is adverse weather at their home stations. From January through March, NAF El Centro is the winter home for the Blue Angels, the US Navy Flight Demonstration Squadron. The predominant aircraft conducting detachment training at NAF El Centro are Navy and Marine Corps FA-18C/D/E/F Hornets and Super Hornets, T-45 Goshawks, with some AV-8B Harriers, EA-6B Prowlers, MV-22 Osprey, and a variety of helicopters.

### **ES.3.1 Alternative 1 – NAF El Centro Aircraft Replacement and Transition**

Under Alternative 1 in 2028, a total of 100 F-35C aircraft would be homebased at NAF El Centro to replace 70 aging FA-18 aircraft currently based at NAS Lemoore. This homebasing would consist of 70 F-35C aircraft for fleet squadrons (7 fleet squadrons with 10 aircraft per squadron) and 30 F-35C aircraft for the FRS. Alternative 1 would result in an increase of 100 F-35C aircraft at NAF El Centro and a decrease of 70 FA-18 aircraft at NAS Lemoore. Currently, there are no permanently based fleet squadrons at NAF El Centro. Instead, NAF El Centro is used for detachment training by various aviation units. Detachment training refers to training conducted away from a homebase at non-local training ranges.

### **ES.3.2 Alternative 1 – NAF El Centro Facility and Infrastructure Requirements**

Homebasing the F-35C at NAF El Centro would require a variety of additional facilities and infrastructure for training, operations and maintenance, and personnel support, as well as the demolition of existing facilities. To accommodate facility and infrastructure needed to support the F-35C, the Navy would need to acquire interest in property not currently owned by the Navy. Alternative 1 would not require any changes to facilities and infrastructure at NAS Lemoore.

Under Alternative 1, proposed construction at NAF El Centro includes 41 projects: 3 training facilities, 26 operations and maintenance facilities, and 12 personnel support facilities. Approximately 6.6 million square feet of construction, expansion, and modification projects would be required. Twenty-nine existing facilities and some concrete/asphalt areas with a total size of nearly 189,000 square feet would be demolished to accommodate the layout of new facilities. The total cost for construction projects, demolition projects, and land acquisition at NAF El Centro is estimated to be \$793 million. Proposed construction and demolition would be phased over multiple years with several projects beginning in 2015 and the last project starting around 2025. The total area that would be disturbed by construction and demolition is approximately 196 acres.

### **ES.3.3 Alternative 1 – NAF El Centro Personnel Requirements**

Alternative 1 would result in an increase of 2,975 military and contractor/civilian personnel at NAF El Centro and a corresponding decrease of 1,539 military personnel at NAS Lemoore. The decrease in number of personnel at NAS Lemoore under Alternative 1 would occur when personnel who are currently supporting aging FA-18 squadrons at NAS Lemoore transition to supporting F-35C squadrons at NAF El Centro. Based on the increase of military and contractor/civilian personnel, there would be an increase of approximately 6,154 dependents (5,075 military dependents and 1,079 contractor/civilian dependents). Overall, Alternative 1 would result in an increase of approximately 9,129 persons (2,975 military, contractor/civilian personnel and 6,154 dependents) in the El Centro area by 2028.

### **ES.3.4 Alternative 1 – F-35C Aircraft Operations at NAF El Centro**

Under Alternative 1, F-35C operations would be conducted at the NAF El Centro airfield and in SUA and MTRs in the vicinity of NAF El Centro. **Table ES-1** shows the baseline (2015) and proposed (2028) annual airfield operations at NAF El Centro and NAS Lemoore under Alternative 1. Homebasing the F-35C at

NAF El Centro would result in an increase of approximately 99,400 operations at the NAF El Centro airfield and a decrease of approximately 33,600 operations at NAS Lemoore. The proposed decrease in operations at NAS Lemoore under Alternative 1 would be due to the reduction of operations by aging FA-18 squadrons, which would relocate to NAF El Centro as F-35C squadrons.

**Table ES-1. Changes in Annual Airfield Operations at NAF El Centro and NAS Lemoore under Alternative 1**

Aircraft	Number of Operations <sup>(1)</sup>		Change
	Baseline (2015)	Proposed (2028)	
NAF El Centro			
F-35C Fleet Squadrons	0	23,900	+23,900
F-35C FRS	0	74,300	+74,300
Detachment/Transient <sup>(2)</sup>	65,800	67,000	+1,200
Total	65,800	165,200	+99,400
NAS Lemoore			
FA-18C Fleet Squadrons	11,400	0	-11,400
FA-18E/F Fleet Squadrons	75,300	53,200	-22,100
FA-18E/F FRS	62,200	62,200	0
Transient	10,500	10,500	0
Total	159,400	125,900	-33,500

Source: Department of the Navy (DoN) 2011a, 2012a.

Notes: 1. Number of operations rounded to the nearest hundred.

2. Detachment/Transient aircraft include FA-18, AV-8B, EA-6B, T-45, and a variety of helicopters.

Under Alternative 1, F-35C operations would take place in the following SUA within the vicinity of NAF El Centro: Restricted Areas R-2301 West (Barry M. Goldwater Range-West); R-2306/R-2308 and R-2507 (Yuma Range Complex); Kane/Abel Military Operations Areas (MOAs); R-2510 and R-2512 (El Centro Range Complex), as well as numerous MTRs, such as IR-211 and VR-296.

**Table ES-2** shows estimated annual operations in SUA in the vicinity of NAF El Centro for the baseline (2015) and proposed end state (2028) under Alternative 1. Homebasing the F-35C at NAF El Centro would result in an increase of approximately 6,229 operations in SUA; however, this increase would be offset by the elimination of roughly 4,020 Navy FA-18 operations. As a result, there would be a net increase of around 2,209 Navy operations in SUA in the vicinity of NAF El Centro. Projected net increases in Marine Corps annual operations, as documented in relevant NEPA documents, are also shown in **Table ES-2** to better portray conditions in 2028.

**Table ES-2. Changes in Annual Operations in Special Use Airspace under Alternative 1**

SUA	Number of Operations					
	Baseline* (2015) <sup>(1,2)</sup>	Proposed Navy F-35C <sup>(3)</sup>	Navy Legacy FA-18 Eliminated <sup>(4)</sup>	USMC F-35B/C Net Increase <sup>(5)</sup>	USMC MV-22 Net Increase <sup>(6)</sup>	Proposed End State (2028)
R-2301 West	30,630	960	-804	1,377	12,063	44,226
R-2306/R-2308	2,419	1,080	0	2,175	0	5,674
R-2507/Abel/Kane MOAs	36,884	2,879	-2,134	3,812	4,249	45,690
R-2512	4,402	388	-360	1,216	70	5,716
R-2510	6,765	922	-722	0	0	6,965



**Table ES-2. Changes in Annual Operations in Special Use Airspace under Alternative 1**

SUA	Number of Operations					
	Baseline* (2015) <sup>(1,2)</sup>	Proposed Navy F-35C <sup>(3)</sup>	Navy Legacy FA-18 Eliminated <sup>(4)</sup>	USMC F-35B/C Net Increase <sup>(5)</sup>	USMC MV-22 Net Increase <sup>(6)</sup>	Proposed End State (2028)
<b>Total</b>	<b>81,100</b>	<b>6,229</b>	<b>-4,020</b>	<b>8,580</b>	<b>16,382</b>	<b>108,271</b>

Sources: 1. ATAC 2012a, 2. ATAC 2012b, 3. DoN 2012a, 4. ATAC 2012c, 5. DoN 2010, 6. DoN 2009.

Note: \* The number of operations shown in this table differs from the number of operations shown in the USMC F-35B West Coast Basing EIS (DoN 2010) because the baseline years are different.

**Table ES-3** shows annual operations in MTRs in the vicinity of NAF El Centro for the baseline (2015) and proposed end state (2028). Under Alternative 1, there would be an increase of approximately 213 operations in MTRs in the vicinity of NAF El Centro. Proposed F-35C operations in MTRs are expected to be conducted during daytime hours.

**Table ES-3. Changes in Annual Operations in Military Training Routes under Alternative 1**

MTR	Number of Operations		Change
	Baseline (2015)*	Proposed (2028)	
IR-211	48	56	+8
IR-212	36	42	+6
IR-213	12	14	+2
IR-216	156	183	+27
IR-217	168	197	+29
IR-218	24	28	+4
IR-250	36	42	+6
VR-296	144	169	+25
VR-1211	108	126	+18
VR-1257	156	183	+27
VR-1266	1,512	1,555	+43
VR-1267	72	84	+12
VR-1268	36	42	+6
<b>Total</b>	<b>2,508</b>	<b>2,721</b>	<b>+213</b>

Source: DoN 2010.

Note: \* The number of operations shown in this table differs from the number of operations shown in the USMC F-35B West Coast Basing EIS (DoN 2010) because the baseline years are different.

## ES.4 ALTERNATIVE 2 – NAS LEMOORE HOMEBASING

NAS Lemoore was established in 1961 and is located in the central portion of the San Joaquin Valley, approximately 80 miles east of the Pacific Ocean, in Kings County and Fresno County, California. The mission of NAS Lemoore is to support Navy fleet carrier strike fighter squadrons. NAS Lemoore hosts more than 40 aviation tenants, including Commander Strike Fighter Wing, US Pacific Fleet.

### ES.4.1 Alternative 2 – NAS Lemoore Aircraft Replacement and Transition

Under Alternative 2 in 2028, a total of 100 F-35C aircraft would be homebased at NAS Lemoore to replace 70 aging FA-18 aircraft currently based at NAS Lemoore. This homebasing would consist of 70 F-35C aircraft for fleet squadrons (7 fleet squadrons with 10 aircraft per squadron) and 30 F-35C aircraft

for the FRS. Alternative 2 would result in an increase of 100 F-35C aircraft and a decrease of 70 FA-18 aircraft at NAS Lemoore. Aircraft loading at NAS Lemoore would increase by 30 aircraft. There would be no changes in aircraft loading at NAF El Centro under Alternative 2 because it has no permanently based fleet squadrons.

#### **ES.4.2 Alternative 2 – NAS Lemoore Facility and Infrastructure Requirements**

Homebasing the F-35C at NAS Lemoore would require additional facilities and infrastructure for training, operations and maintenance, and personnel support. Under Alternative 2, proposed construction at NAS Lemoore includes 16 projects: 5 training facilities, 10 operations and maintenance facilities, and 1 personnel support facility. In addition, two projects would be required at NAF El Centro to accommodate F-35C squadrons from NAS Lemoore conducting detachment training operations at NAF El Centro: interior hangar renovations and a Special Access Program Facility. Approximately 1.6 million square feet of construction, expansion, and modification projects would be required. No demolition would be necessary. The total cost for all the projects at NAS Lemoore and the two projects at NAF El Centro is estimated to be \$242 million. Proposed construction would be phased over multiple years, with several projects beginning in 2015 and the last project starting around 2025. The total area that would be disturbed by construction at NAS Lemoore is approximately 58 acres.

#### **ES.4.3 Alternative 2 – NAS Lemoore Personnel Requirements**

Alternative 2 would result in an increase of 751 military and contractor/civilian personnel at NAS Lemoore. Unlike Alternative 1, Alternative 2 would not require any changes in personnel at NAF El Centro because there would be no change in the mission or the number of aircraft supported at NAF El Centro. Personnel who are currently supporting aging FA-18 squadrons at NAS Lemoore would remain at NAS Lemoore while transitioning to F-35C squadrons. Based on this increase of military and contractor/civilian personnel, there would be an increase of approximately 1,569 dependents (1,145 military dependents and 424 contractor/civilian dependents). Overall, Alternative 2 would result in an increase of approximately 2,320 persons (751 military, contractor/civilian personnel and 1,569 dependents) in the Lemoore area by 2028.

#### **ES.4.4 Alternative 2 – F-35C Aircraft Operations at NAS Lemoore**

Under Alternative 2, F-35C operations would be conducted at the NAS Lemoore airfield and in SUA and MTRs in the vicinity of NAS Lemoore. In addition, F-35C aircraft homebased at NAS Lemoore would conduct detachment training operations at NAF El Centro in much the same way that FA-18 squadrons currently operate at NAF El Centro. **Table ES-4** shows the baseline (2015) and proposed (2028) annual airfield operations at NAS Lemoore and NAF El Centro under Alternative 2. Homebasing the F-35C at NAS Lemoore would result in an increase of approximately 68,400 operations at the NAS Lemoore airfield and an increase of approximately 800 operations at the NAF El Centro airfield.

**Table ES-4. Changes in Annual Airfield Operations at NAS Lemoore and NAF El Centro under Alternative 2**

Aircraft	Number of Operations*		Change
	Baseline (2015)	Proposed (2028)	
NAS Lemoore			
F-35C Fleet Squadrons	0	25,200	+25,200
F-35C FRS	0	76,700	+76,700
FA-18C Fleet Squadrons	11,400	0	-11,400
FA-18E/F Fleet Squadrons	75,300	53,200	-22,100
FA-18E/F FRS	62,200	62,200	0
Transient	10,500	10,500	0
Total	159,400	227,800	+68,400
NAF El Centro			
Detachment/Transient	65,800	66,600	+800
Total	65,800	66,600	+800

Sources: DoN 2011b, 2012b.

Note: \*Number of operations rounded to the nearest hundred.

Under Alternative 2, F-35C operations would take place in the following SUA in the vicinity of NAS Lemoore: R-2508 (China Lake Complex), R-2524 (Superior Valley Range), Lemoore MOA, R-2513/Hunter MOA, as well as numerous MTRs, such as VR-201 and VR-1255. **Tables ES-5** and **ES-6** show the baseline (2015) and proposed (2028) annual operations in SUA and MTRs in the vicinity of NAS Lemoore under Alternative 2. Homebasing the F-35C at NAS Lemoore would result in an increase of approximately 3,394 operations in SUA and approximately 54 operations in MTRs in the vicinity of NAS Lemoore. FA-18 aircraft operating out of NAS Lemoore currently use these MTRs for daytime operations. Proposed F-35C operations in MTRs are expected to be conducted during daytime hours.

**Table ES-5. Changes in Annual Operations in Special Use Airspace under Alternative 2**

SUA	Number of Operations		Change
	Baseline (2015)	Proposed (2028)	
R-2508 China Lake Complex	4,776	7,156	+2,380
R-2524 Superior Valley Range	3,128	3,240	+112
Lemoore MOA	1,264	2,090	+826
R-2513/Hunter MOA	82	158	+76
<b>Total</b>	<b>9,250</b>	<b>12,644</b>	<b>+3,394</b>

Source: DoN 2012b.

**Table ES-6. Changes in Annual Operations in Military Training Routes under Alternative 2**

MTR*	Number of Operations		Change
	Baseline (2015)	Proposed (2028)	
IR-203	8	8	0
IR-207	129	129	0
VR-201	237	246	9
VR-202	251	254	3
VR-208	23	23	0
VR-209	51	51	0

**Table ES-6. Changes in Annual Operations in Military Training Routes under Alternative 2**

MTR*	Number of Operations		Change
	Baseline (2015)	Proposed (2028)	
VR-1250	61	63	2
VR-1251	22	25	3
VR-1252	1	1	0
VR-1253	17	17	0
VR-1254	6	6	0
VR-1255	255	284	29
VR-1256	2	2	0
VR-1257	95	98	3
VR-1259	4	4	0
VR-1260	2	2	0
VR-1261	24	26	2
VR-1262	38	41	3
VR-1264	1	1	0
<b>Total</b>	<b>1,227</b>	<b>1,281</b>	<b>+54</b>

Source: US Fleet Forces Command 2011.

Note: \* Includes all users of the MTRs.

## ES.5 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Navy would not provide facilities and functions on the West Coast to support homebasing the F-35C in the Navy Pacific Fleet. Under the No Action Alternative, the Navy would not renovate, expand, or construct new facilities or infrastructure. Consequently, there would be no increase in functional capacity at any alternative homebasing site. Moreover, there would be no changes in personnel or aircraft operations related to the F-35C at potential homebase locations.

The No Action Alternative does not meet the purpose of or the need for the proposed action. However, the conditions associated with the No Action Alternative serve as reference points for describing and quantifying the potential impacts associated with proposed homebasing alternatives. In this case, the 2015 aircraft loading, facility and infrastructure assets, personnel levels, and number of aircraft operations at potential homebasing alternatives provide the baseline to compare the proposed requirements necessary to accommodate homebasing the F-35C.

## ES.6 PREFERRED ALTERNATIVE

Alternative 2, Homebasing the F-35C at NAS Lemoore, is the preferred alternative because it best meets mission requirements while optimizing operational efficiencies related to training and logistics support functions. Alternative 2 presents the greatest re-use of existing facilities and optimizes Strike Fighter and installation support functions and personnel. Alternative 2 also preserves NAF El Centro as a valuable Fleet Training Complex, available to all fleet replacement squadrons, fleet squadrons, undergraduate training squadrons, and the Navy Flight Demonstration Team.

## **ES.7 PUBLIC INVOLVEMENT**

The Navy published notices of its intent to prepare an EIS and invited public participation in identifying the scope and issues related to the proposed action. The 45-day public scoping period for this EIS officially began on January 28, 2011 and closed on March 14, 2011. Public scoping meetings were announced on January 28, 2011 when the Navy published a Notice of Intent in the *Federal Register*. The Navy also published a series of display advertisements in four newspapers (three English and one Spanish) serving the communities in the vicinity of NAF El Centro and NAS Lemoore announcing its intent to prepare an EIS; the dates, times, and locations for two scoping meetings; and four ways for the public to provide comments.

Notification and coordination letters were sent to federal, state, and local agencies; Native American tribes; elected officials; and various interest groups most likely to be interested in the proposed action. A project website (<http://www.navyf35cwestcoasteis.com>) was made available to the public on January 27, 2011, 3:00 pm Pacific time, and was updated periodically throughout the scoping process. Information on the website was provided in both English and Spanish. Additionally, the public website contained webpages that allowed the public to submit written comments online in both English and Spanish. During the scoping period, the website was visited approximately 320 times. The link to the project website was listed in all other scoping notification materials. Press releases were issued on January 27, 2011 to the local media (i.e., television, radio, and online news sources) in the vicinity of NAF El Centro and NAS Lemoore, and also to the San Diego regional media where Commander Navy Region Southwest is headquartered. Media organizations were also invited to participate in media events held one day prior to each of the scoping meetings.

In February 2011, the Navy held public scoping meetings in the cities of El Centro and Lemoore. The scoping meetings were conducted in an open-house format designed to enhance public understanding of the project and NEPA process and to allow the public to identify to Navy representatives issues and concerns they would like to see addressed in the EIS. During the scoping meetings, attendees could speak individually with Navy representatives and submit written and oral comments. Several Spanish-speaking Navy representatives were available to aid in discussions with Spanish-speaking community members. An independent Spanish interpreter was present to interpret Spanish oral comments to a stenographer who recorded them in English. A total of 187 individuals signed in at the two meetings, including federal and state elected officials, the media, city government agencies, local community planning groups, and local school representatives.

A total of 253 comments addressing multiple issues were received through the four methods made available to the public: written comments at the scoping meetings, oral comments to a stenographer at the scoping meetings, written comments on the project website, and written comments mailed to the Navy. Primary issues raised during scoping related to socioeconomics, community facilities and services, infrastructure and utilities, and land use. To a lesser extent, scoping comments focused on airfields and airspace, noise, and the evaluation of cumulative effects. Overall, the public at both Lemoore and El Centro generally expressed support for the proposed homebasing of the Navy F-35C in their communities, with more than 85 percent commenting in favor of the proposed action. Comments

provided by elected officials were also positive in nature and supported homebasing the F-35C in their respective areas.

## **ES.8 SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS**

**Table ES-7** provides a summary of potential environmental effects from Alternative 1 – NAF El Centro Homebasing and Alternative 2 – NAS Lemoore Homebasing. For each alternative, there would be changes at both NAF El Centro and NAS Lemoore. As a result, potential environmental effects from each alternative are summarized in terms of effects at NAF El Centro and effects at NAS Lemoore.

No mitigation measures were identified during the development of this Draft EIS. As the NEPA process progresses, mitigation measures may emerge and management actions may be altered based on consultation with federal and state regulatory agencies and comments received from the public. The Final EIS will be updated to reflect any changes and if mitigation measures were identified for the selected alternative they would be identified in the Record of Decision. These measures would be funded, and efforts to ensure their successful completion or implementation are treated as compliance requirements.

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Airfields and Airspace	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impact from increase of 99,400 aircraft operations at NAF El Centro airfield and a net increase of 2,209 aircraft operations in SUA and 213 in MTRs in the vicinity of NAF El Centro.</li> <li>Changes in approach and departure patterns for new 9,500-foot runway and extension of primary runway.</li> <li>Structure of Controlled Airspace around NAF El Centro unchanged.</li> <li>Management and control of air traffic modified to include operations at new runway.</li> <li>May be less opportunity for civil aviation to transit existing SUA.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impact from increase of 68,400 aircraft operations at NAS Lemoore airfield and increase of 3,448 aircraft operations in SUA and MTRs in the vicinity of NAS Lemoore.</li> <li>Use and structure of approach and departure patterns unchanged.</li> <li>Management and structure of Controlled Airspace around NAS Lemoore, as well as air traffic control, unchanged.</li> <li>May be less opportunity for civil aviation to transit existing SUA.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impact from decrease of 33,600 aircraft operations at NAS Lemoore airfield from reduction in FA-18 squadrons currently based at NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impact from increase of 800 aircraft operations at NAF El Centro airfield from NAS Lemoore F-35C squadrons conducting detachment training at NAF El Centro.</li> </ul>
Noise	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li><b>Significant noise impacts</b> from proposed F-35C operations at the NAF El Centro airfield.</li> <li>No significant noise impacts from proposed F-35C operations in SUA and MTRs in the vicinity of NAF El Centro.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant noise impacts from proposed F-35C operations at the NAS Lemoore airfield.</li> <li>No significant noise impacts from proposed F-35C operations in SUA and MTRs in the vicinity of NAS Lemoore.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant noise impacts from decreased aircraft operations at the NAS Lemoore airfield.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant noise impacts from proposed F-35C operations at the NAF El Centro airfield.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Air Quality	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to air quality.</li> <li>Emissions from airfield operations, construction, and commuting vehicles would conform to the Imperial County Air Pollution Control District (APCD) Final 8-Hour Ozone Air Quality Management Plan budgets for nitrogen oxide (NO<sub>x</sub>) through 2023. The Imperial County APCD is committed to working with NAF El Centro and US Environmental Protection Agency (USEPA) to establish budgets for future years beyond 2023.</li> <li>The estimated CO<sub>2</sub>e emissions for Alternative 1 are less than a thousandth of one percent of the total CO<sub>2</sub>e emissions generated by the United States in 2010.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to air quality.</li> <li>Emissions from airfield operations, construction, and commuting vehicles would conform to the USEPA-approved 2007 Ozone Plan, with NO<sub>x</sub> emissions accounted for through 2025. The San Joaquin Valley APCD is committed to working with NAS Lemoore and USEPA to establish budgets for future years beyond 2025.</li> <li>The estimated CO<sub>2</sub>e emissions for Alternative 2 are less than a thousandth of one percent of the total CO<sub>2</sub>e emissions generated by the United States in 2010.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to air quality as operational emissions would decrease and therefore not exceed <i>de minimis</i> thresholds.</li> <li>The estimated CO<sub>2</sub>e emissions for Alternative 1 are less than a thousandth of one percent of the total CO<sub>2</sub>e emissions generated by the United States in 2010.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to air quality from construction of one facility and interior hangar renovations at NAF El Centro.</li> <li>The calculated and compared results indicate that the small increase in emissions in the period 2016-2028 would not be anticipated to exceed <i>de minimis</i> thresholds, and emissions would have negligible impacts on regional air quality.</li> <li>The estimated CO<sub>2</sub>e emissions for Alternative 2 are less than a thousandth of one percent of the total CO<sub>2</sub>e emissions generated by the United States in 2010.</li> </ul>
Safety	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant safety impacts from F-35C operational training at the NAF El Centro airfield or within SUA, and from changes to Explosive Safety Quantity Distance (ESQD) arcs.</li> <li>Extensive use of flight simulators would minimize risk associated with aircraft mishaps due to pilot error.</li> <li>Increased aircraft operations would result in increased bird/animal aircraft strike hazard (BASH) potential; however, limits may be placed on low altitude flights and pilots would have special briefings during periods of increased BASH potential.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant safety impacts from F-35C operational training at the NAS Lemoore airfield or within SUA.</li> <li>Extensive use of flight simulators would minimize risk associated with aircraft mishaps due to pilot error.</li> <li>Increased aircraft operations would result in increased BASH potential; however, limits may be placed on low altitude flights and pilots would have special briefings during periods of increased BASH potential.</li> </ul>



**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Safety, continued	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant safety impacts from decreased aircraft operations at the NAS Lemoore airfield.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant safety impacts from increased aircraft operations at the NAF El Centro airfield.</li> </ul>
Land Use	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li><b>Significant impacts to land use from noise</b> because designated residential land uses would be incompatible with proposed noise levels.</li> <li>Changes in land use for some privately owned properties proposed for acquisition by the Navy.</li> <li>Need for additional housing and services may alter existing local and regional land uses.</li> <li>No significant impacts to National Parks from proposed F-35C aircraft overflights.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to NAS Lemoore land use and local and regional land use.</li> <li>No significant impacts to National Parks from proposed F-35C aircraft overflights.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to NAS Lemoore land use from decreased aircraft operations and personnel levels.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to NAF El Centro land use from increased aircraft operations and from construction of one facility and interior hangar renovations.</li> </ul>
Infrastructure and Utilities	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to infrastructure and utilities from facility development and personnel increases.</li> <li>Increase demand for water of 1,266 acre-foot per year by 2028 met by Imperial Irrigation District water supply.</li> <li>Temporary and intermittent increase in demand for water at NAF El Centro during demolition and construction.</li> <li>Increase in demand for treatment of wastewater of 0.21 million gallons per day (mgd) at NAF El Centro met by construction of new wastewater treatment facility with capacity to treat 0.6 mgd; increase in demand for treatment of wastewater in the City of El Centro of 0.58 mgd met by existing municipal wastewater treatment facility.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to infrastructure and utilities from facility development and personnel increases.</li> <li>Increase demand for water of 0.28 mgd in region by 2028 met by Westlands Water District water supply.</li> <li>Increase in demand for water at NAS Lemoore of 0.09 mgd met by NAS Lemoore water treatment capacity to treat.</li> <li>Temporary and intermittent increase in demand for water at NAS Lemoore during construction.</li> <li>Increase in demand for treatment of wastewater of 0.05 mgd at NAS Lemoore met by NAS Lemoore wastewater treatment facility; increase in demand for treatment of wastewater in City of Lemoore of 0.16 mgd met by existing municipal wastewater treatment facility.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Infrastructure and Utilities, continued	<ul style="list-style-type: none"> <li>Stormwater runoff from demolition and construction activities at NAF El Centro minimized with Stormwater Pollution Prevention (SWPP) Plan and Best Management Practices.</li> <li>Increase in demand for electricity and natural gas at NAF El Centro and region met by available capacity.</li> <li>Increase in solid waste met by adequate capacity at Allied Imperial Landfill.</li> </ul>	<ul style="list-style-type: none"> <li>Stormwater runoff from construction activities at NAS Lemoore minimized with SWPP Plan and Best Management Practices.</li> <li>Increase in demand for electricity and natural gas at NAS Lemoore and region met by available capacity.</li> <li>Increase in solid waste met by adequate capacity at Avenal Municipal Landfill.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to infrastructure and utilities from decreases in demand for potable water, wastewater treatment, electricity, natural gas and solid waste.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to infrastructure and utilities from increased aircraft operations and from construction of one facility and interior hangar renovations.</li> </ul>
Socioeconomics	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li><b>Significant impacts to socioeconomic characteristics</b> from disproportionate effects to children from noise and from impact to local housing market from five percent increase in demand for community housing in Imperial County.</li> <li>Five percent increase in projected 2020 population</li> <li>Industry resources likely able to accommodate employment demand associated with proposed construction and demolition activities at NAF El Centro.</li> <li>Short-term economic benefit to region from military construction and demolition and construction projects at NAF El Centro (peak annual impact of 2,755 jobs, \$156 million in labor income).</li> <li>Long-term economic benefit from increase in personnel and dependents at NAF El Centro (\$141.2 million in direct annual income for additional NAF El Centro personnel; secondary impacts of 1,139 jobs and \$64.2 million in labor income).</li> <li>No disproportionate impact to minority or low-income populations in the NAF El Centro area.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to socioeconomic characteristics from increased personnel levels.</li> <li>Less than one percent increase in projected 2020 population.</li> <li>Industry resources likely able to accommodate the employment demand associated with proposed construction activities at NAS Lemoore.</li> <li>Short-term economic benefit to region from military construction and demolition projects at NAS Lemoore (peak annual impact of 661 jobs, \$36 million in labor income).</li> <li>Long-term economic benefit as a result of an increase of personnel and dependents at NAS Lemoore (\$36.5 million in direct annual income for additional NAS Lemoore personnel; secondary impacts of 471 jobs and \$25.2 million in labor income).</li> <li>Less than one percent increase in demand for community housing in Kings and Fresno counties.</li> <li>No disproportionate impact to minority or low-income populations or to children in the NAS Lemoore area.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Socioeconomics, continued	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>• No significant impacts to socioeconomic characteristics from decreased personnel levels.</li> <li>• Population reduction of 4,653 (less than 1 percent) at NAS Lemoore would result in an estimated loss of direct annual income of \$70.7 million that would affect regional spending.</li> <li>• Estimated 787 lost jobs and a reduction of \$38.7 million in labor income in the NAS Lemoore region.</li> <li>• Minor increase in NAS Lemoore regional unemployment rate (Kings and Fresno counties).</li> <li>• Short-term impacts to local housing market expected to recover.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>• No significant impacts to socioeconomic characteristics from increased aircraft operations and from construction of one facility and interior hangar renovations.</li> </ul>
Community Services	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>• No significant impacts to community services from increase of 2,975 personnel and 6,154 dependents.</li> <li>• Increase in school age children; adequate capacity exists.</li> <li>• Existing child care facility, the child home care program, and the proposed child care facilities able to accommodate additional children in all age groups.</li> <li>• Additional police officers required in the City of El Centro and surrounding region.</li> <li>• A new aircraft and structural fire station would be constructed at NAF El Centro; fire protection services within the City of El Centro and the City of Imperial plan to develop new fire stations to accommodate anticipated population growth.</li> <li>• Increase in demand for dental and urgent care in El Centro region</li> <li>• Recreational opportunities on and off the installation continue to be available.</li> <li>• Religious services able to accommodate needs of increased personnel.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>• No significant impacts to community services from increase of 751 personnel and 1,569 dependents.</li> <li>• Minimal impact to school services as influx of dependents and school age children would occur over a 13-year period; adequate capacity exists in Kings County; Fresno County schools operating near or over their designated capacity and could be impacted.</li> <li>• Existing child care facility and home care program has adequate capacity.</li> <li>• Additional police officers required in surrounding municipalities or counties.</li> <li>• Additional fire protection services on the installation not required; fire protection services off the installation continue to focus on fire-safe development.</li> <li>• Health services on the installation expected to meet increased demand.</li> <li>• Recreational opportunities on and off the installation continue to be available.</li> <li>• Religious services able to accommodate needs of increased personnel.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Community Services, continued	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to community services from decreased personnel levels at NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to community services from increased aircraft operations and from construction of one facility and interior hangar renovations.</li> </ul>
Ground Traffic and Transportation	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li><b>Significant impacts to traffic and transportation</b> from increase of 2,975 personnel at NAF El Centro and increased traffic on local roads.</li> <li>End state traffic conditions would result in several intersections with failing levels of service; several measures would need to be taken to reduce impacts to levels of service, such as providing signalization and additional turning lanes and through lanes.</li> <li>Improvements to roadway infrastructure such as additional turning lanes, travel lanes, and access improvements have been recommended to off-set impacts to traffic.</li> <li>Temporary increases in traffic associated with construction and demolition activities.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to traffic and transportation from increase of 751 personnel at NAS Lemoore and increased traffic on local roads.</li> <li>Temporary increases in traffic associated with construction activities.</li> <li>No significant impacts to levels of service are anticipated.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to traffic and transportation from reduction of 1,539 personnel at NAS Lemoore and reduction in traffic on roadways near NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to traffic and transportation from temporary increases in traffic associated with construction of one facility and interior hangar renovations.</li> </ul>
Biological Resources	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impact to biological resources.</li> <li>Proposed demolition and construction activities would impact 196 acres of previously disturbed or actively managed areas, with 151 acres of new impervious surface; no significant impacts to vegetation.</li> <li>Proposed construction and demolition activities would cause short-term increases in noise levels within project areas, temporarily displacing wildlife and migratory birds; avoidance measures would be implemented to avoid and minimize potential impacts to burrowing owls from construction activities.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impact to biological resources.</li> <li>Proposed construction activities would impact 58 acres of previously disturbed and actively managed areas, with 36 acres of new impervious surfaces; no significant impacts to vegetation.</li> <li>Proposed construction activities would cause short-term increases in noise levels within project areas, temporarily displacing wildlife and migratory birds; avoidance measures would be implemented to avoid and minimize potential impacts to burrowing owls from construction activities.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Biological Resources, continued	<ul style="list-style-type: none"> <li>Noise levels associated with the proposed increase in aircraft operations would not result in significant impacts to wildlife and migratory birds because of existing high ambient noise levels within the airfield environment.</li> <li>Continued low BASH potential with implementation of NAF El Centro BASH reduction measures in accordance with the installation BASH Plan.</li> <li>No significant impacts to special-status species and no effect on Endangered Species Act (ESA)-listed species.</li> </ul>	<ul style="list-style-type: none"> <li>Noise levels associated with the proposed increase in aircraft operations would not result in significant impacts to wildlife and migratory birds because of existing high ambient noise levels within the airfield environment.</li> <li>Continued low BASH potential with implementation of NAS Lemoore BASH reduction measures in accordance with the installation BASH Plan.</li> <li>No significant impact to special status species and no effect on ESA-listed species.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impact to biological resources due to no facility development at NAS Lemoore and decrease in aircraft operations and personnel at NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impact to biological resources from construction of one facility at NAF El Centro within a previously disturbed area, from interior hangar renovations, and from noise levels from proposed aircraft operations at NAF El Centro.</li> <li>Increased noise levels not expected to impact wildlife and migratory birds in the area because they are likely accustomed to current noise levels associated with ongoing aircraft operations at NAF El Centro.</li> <li>No significant impacts to wildlife and special-status species and no effect to ESA-listed species.</li> </ul>
Topography and Soils	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to soils or topography at NAF El Centro.</li> <li>Short-term impacts to soils from construction and demolition activities on 196 acres of predominantly previously disturbed land, with the addition of 151 acres of new impervious surfaces.</li> <li>A SWPP Plan would be prepared and Best Management Practices (BMPs) would be implemented to avoid and minimize erosion and sedimentation.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to soils or topography at NAS Lemoore.</li> <li>Short-term impacts to soils from construction activities on 58 acres of previously disturbed/managed land, with the addition of 36 acres of new impervious surfaces.</li> <li>A SWPP Plan would be prepared and BMPs would be implemented to avoid and minimize erosion and sedimentation.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to topography and soils due to no facility development at NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to soils or topography at NAF El Centro from construction of one facility on a previously disturbed area and interior hangar renovations.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Topography and Soils, continued		<ul style="list-style-type: none"> <li>BMPs would be implemented to avoid and minimize erosion and sedimentation.</li> </ul>
Water Resources	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to water resources.</li> <li>No impacts to groundwater.</li> <li>No impacts to water quality; construction activities performed in compliance with California’s General Construction Stormwater Permit.</li> <li>Demolition and construction activities at NAF El Centro require preparation of a Stormwater Pollution Prevention Plan and implementation of Best Management Practices to limit erosion and runoff.</li> <li>No impacts to wetlands and floodplains.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to water resources.</li> <li>No impacts to groundwater.</li> <li>No impacts to water quality; increase in surface water runoff from construction managed in compliance with California’s General Construction Stormwater Permit; new project sites require preparation of a Stormwater Pollution Prevention Plan and implementation of Best Management Practices to limit erosion and runoff.</li> <li>No impacts to wetlands or floodplain.</li> </ul>
	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to water resources due to no facility development at NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to water resources from construction of one facility and interior hangar renovations.</li> </ul>
Cultural and Traditional Resources	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to cultural and traditional resources</li> <li>Buildings and structures to be demolished are not eligible for the National Register.</li> <li>No impacts to archaeological sites or traditional cultural properties.</li> <li>Navy would follow Integrated Cultural Resource Management Plan procedures should any inadvertent discoveries be made during construction and demolition activities.</li> <li>Programmatic Agreement between Navy and California State Historic Preservation Officer would cover Section 106 compliance for any future actions involving properties proposed for acquisition or restrictive easement.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to cultural and traditional resources</li> <li>Existing buildings to be modified are not eligible for the National Register.</li> <li>No impacts to archaeological sites or traditional cultural properties.</li> <li>Navy would follow Integrated Cultural Resource Management Plan procedures should any inadvertent discoveries be made during construction activities.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
Cultural and Traditional Resources, continued	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to cultural and traditional resources due to no facility development and decrease in aircraft operations at NAS Lemoore.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to cultural and traditional resources.</li> <li>Navy would follow Integrated Cultural Resource Management Plan procedures should any inadvertent discoveries be made during construction.</li> </ul>
Hazardous Materials and Waste	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to public health and safety and the environment from hazardous materials and waste.</li> <li>No impact to hazardous waste management activities as existing procedures in place for safe handling, use, and disposal of hazardous substances and waste during demolition and construction.</li> <li>The addition of 100 F-35C aircraft would increase use of hazardous materials and generation of hazardous waste, which would follow established hazardous material standard operating procedures and hazardous waste management plans.</li> <li>No significant impact to human health and the environment from removal/relocation of aboveground storage tanks to accommodate facility development; tank removal/relocation conducted in accordance with applicable regulations and the installation Spill, Prevention, Control and Countermeasures Plan to eliminate/minimize potential adverse impacts.</li> <li>Beneficial impact to hazardous materials at NAF El Centro as structures proposed for demolition would be surveyed for hazardous materials to protect public health and safety and the environment; asbestos-containing materials would be removed from structures prior to demolition; lead-based paint would be tested prior to demolition to determine appropriate handling and disposal options; PCB containing materials would be characterized; all hazardous materials would be managed and disposed of in accordance with to applicable regulations.</li> </ul>	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to public health and safety and the environment from hazardous materials and waste.</li> <li>No impact to hazardous waste management activities as existing procedures in place for safe handling, use, and disposal of hazardous substances and waste during construction.</li> <li>Beneficial impact to hazardous waste generation as volumes of hazardous wastes generated by aircraft operations would decrease compared to amounts currently generated in support of legacy aircraft operations.</li> <li>Two Installation Restoration sites potentially affected by construction activities; construction in contaminated areas would be conducted in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act.</li> <li>The hazardous materials associated with the F-35C program would not impact installation management programs at NAF El Centro.</li> </ul>

**Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore**

<b>Resource</b>	<b>Alternative 1 – NAF El Centro Homebasing</b>	<b>Alternative 2 – NAS Lemoore Homebasing</b>
	<ul style="list-style-type: none"> <li>Installation Restoration Sites 2, 7, 8, 4, 9, and 17 and one Military Munitions Response Program site would be disturbed during construction; construction in contaminated areas would be conducted in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act.</li> <li>The hazardous materials associated with the F-35C program would not impact installation management programs at NAF El Centro.</li> </ul>	
Hazardous Materials and Waste, continued	<p><i>Effects at NAS Lemoore</i></p> <ul style="list-style-type: none"> <li>No significant impacts to public health and safety and the environment from hazardous materials and waste.</li> <li>Beneficial impact to hazardous material generation; reduced operations at NAS Lemoore would decrease hazardous materials use and hazardous waste generation.</li> <li>No impact to the overall management of hazardous materials or hazardous waste at NAS Lemoore.</li> <li>No impacts to contaminated sites.</li> </ul>	<p><i>Effects at NAF El Centro</i></p> <ul style="list-style-type: none"> <li>No significant impacts to public health and safety and the environment from hazardous materials and waste.</li> <li>No significant impacts to hazardous materials and waste NAF El Centro from construction of one facility on a previously disturbed area.</li> </ul>



## TABLE OF CONTENTS

### VOLUME I: CHAPTERS 1 – 10

ES.1	Purpose and Need .....	ES-1
ES.2	Proposed Action .....	ES-1
ES.3	Alternative 1 – NAF El Centro Homebasing .....	ES-2
ES.4	Alternative 2 – NAS Lemoore Homebasing .....	ES-5
ES.5	No Action Alternative .....	ES-8
ES.6	Preferred Alternative .....	ES-8
ES.7	Public Involvement .....	ES-9
ES.8	Summary of Potential Environmental Effects.....	ES-10
1.	INTRODUCTION .....	1-1
1.1	Background.....	1-3
1.1.1	History of the FA-18 Hornet Aircraft .....	1-3
1.1.2	Comparison of FA-18C and F-35C Aircraft .....	1-3
1.2	Purpose and Need .....	1-5
1.3	Public Involvement .....	1-5
1.3.1	Scoping Notification .....	1-5
1.3.2	Scoping Meetings .....	1-7
1.3.3	Public Comments.....	1-7
1.4	Relevant Environmental Documents.....	1-8
1.5	Baseline Conditions .....	1-10
2.	PROPOSED ACTION AND ALTERNATIVES .....	2-1
2.1	Proposed Action .....	2-1
2.1.1	Aircraft Replacement and Transition .....	2-1
2.1.2	F-35C Facility and Infrastructure Requirements.....	2-1
2.1.2.1	Training Facilities .....	2-2
2.1.2.2	Operations and Maintenance Facilities .....	2-2
2.1.2.3	Personnel Support Facilities .....	2-3
2.1.3	F-35C Personnel Requirements.....	2-3
2.1.4	F-35C Operations .....	2-4
2.1.4.1	F-35C Airfield Operations .....	2-5
2.1.4.2	F-35C Operations in Special Use Airspace and Military Training Routes.....	2-5
2.2	No Action Alternative .....	2-5
2.3	Development of F-35C Homebasing Action Alternatives.....	2-6
2.4	Candidate Site Descriptions .....	2-9
2.4.1	NAF El Centro .....	2-9
2.4.2	NAS Lemoore.....	2-11
2.5	Alternatives Considered but Dismissed.....	2-11
2.6	Summary of Alternatives .....	2-13
2.7	Alternative 1 – NAF El Centro Homebasing .....	2-13
2.7.1	Alternative 1 – Aircraft Replacement and Transition .....	2-13
2.7.2	Alternative 1 – Facility and Infrastructure .....	2-14
2.7.3	Alternative 1 – Personnel Changes .....	2-25
2.7.4	Alternative 1 – Aircraft Operations.....	2-25
2.7.4.1	Alternative 1 – Airfield Operations.....	2-26

	2.7.4.2	Alternative 1 – Operations in Special Use Airspace and Military Training Routes.....	2-27
<b>2.8</b>		<b>Alternative 2 – NAS Lemoore Homebasing .....</b>	<b>2-29</b>
	2.8.1	Alternative 2 – Aircraft Replacement and Transition .....	2-29
	2.8.2	Alternative 2 – Facility and Infrastructure .....	2-30
	2.8.3	Alternative 2 – Personnel Changes .....	2-37
	2.8.4	Alternative 2 – Aircraft Operations.....	2-37
	2.8.4.1	Alternative 2 – Airfield Operations.....	2-37
	2.8.4.2	Alternative 2 – Operations in Special Use Airspace and Military Training Routes.....	2-38
<b>2.9</b>		<b>Preferred Alternative .....</b>	<b>2-41</b>
<b>3.</b>		<b>RESOURCE DEFINITIONS, REGULATORY SETTING, AND APPROACH TO ANALYSIS.....</b>	<b>3-1</b>
<b>3.1</b>		<b>Airfields and Airspace .....</b>	<b>3-1</b>
	3.1.1	Airfield Operations .....	3-1
	3.1.2	Airspace Operations .....	3-2
<b>3.2</b>		<b>Noise .....</b>	<b>3-5</b>
	3.2.1	Basics of Sound and A-weighted Sound Level .....	3-5
	3.2.2	Noise Metrics .....	3-7
	3.2.2.1	Day-Night Average Sound Level .....	3-8
	3.2.2.2	Community Noise Equivalent Level.....	3-8
	3.2.2.3	Equivalent Sound Level.....	3-8
	3.2.2.4	Sound Exposure Level.....	3-9
	3.2.2.5	Maximum Sound Level .....	3-9
	3.2.2.6	Number of Events Above a Threshold Level.....	3-9
	3.2.3	Noise Effects.....	3-9
	3.2.3.1	Annoyance.....	3-10
	3.2.3.2	Potential Hearing Loss .....	3-10
	3.2.3.3	Speech Interference .....	3-10
	3.2.3.4	Classroom Criteria and Noise Effects on Children .....	3-11
	3.2.3.5	Sleep Disturbance.....	3-11
	3.2.3.6	Workplace Noise .....	3-11
	3.2.3.7	Nonauditory Health Effects .....	3-11
	3.2.3.8	Noise Effects on Children .....	3-12
	3.2.4	Noise Modeling .....	3-12
<b>3.3</b>		<b>Air Quality .....</b>	<b>3-12</b>
	3.3.1	Criteria Pollutants .....	3-12
	3.3.2	General Conformity Rule .....	3-15
	3.3.3	Greenhouse Gases.....	3-16
<b>3.4</b>		<b>Safety .....</b>	<b>3-17</b>
	3.4.1	Flight Safety.....	3-17
	3.4.2	Bird/Animal Aircraft Strike Hazard .....	3-18
	3.4.3	Clear Zones and Accident Potential Zones .....	3-18
	3.4.4	Explosive Safety.....	3-19
<b>3.5</b>		<b>Land Use.....</b>	<b>3-20</b>

3.6	Infrastructure and Utilities.....	3-21
3.7	Socioeconomics .....	3-21
3.8	Community Services .....	3-22
3.9	Ground Traffic and Transportation .....	3-23
3.10	Biological Resources .....	3-23
3.11	Topography and Soils.....	3-24
3.12	Water Resources.....	3-25
3.13	Cultural and Traditional Resources .....	3-26
3.14	Hazardous Materials and Waste .....	3-27
3.14.1	Hazardous Materials.....	3-28
3.14.2	Hazardous Waste .....	3-28
3.14.3	Toxic Substances .....	3-28
3.14.4	Contaminated Sites .....	3-29
3.14.4.1	Environmental Restoration Program.....	3-29
3.14.4.2	Military Munitions Response Program.....	3-30
3.15	Cumulative Impacts Analysis .....	3-30
3.16	Assessing Significance .....	3-30
4.	ALTERNATIVE 1 – NAF EL CENTRO HOMEBASING .....	4-1
4.1	Airfields and Airspace .....	4-1
4.1.1	Affected Environment .....	4-1
4.1.1.1	Airfield Operations .....	4-1
4.1.1.2	Special Use Airspace and Military Training Routes .....	4-2
4.1.2	Environmental Consequences for Alternative 1.....	4-4
4.1.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-4
4.1.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-9
4.1.3	Environmental Consequences for the No Action Alternative .....	4-10
4.2	Noise .....	4-10
4.2.1	Affected Environment .....	4-10
4.2.1.1	Airfield Operations .....	4-10
4.2.1.2	Special Use Airspace and Military Training Routes .....	4-16
4.2.2	Environmental Consequences for Alternative 1.....	4-16
4.2.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-16
4.2.2.2	Alternative 1 – Homebasing at NAF El Centro, Effects at NAS Lemoore .....	4-25
4.2.3	Environmental Consequences for the No Action Alternative .....	4-30
4.3	Air Quality .....	4-30
4.3.1	Affected Environment .....	4-31
4.3.2	Environmental Consequences for Alternative 1.....	4-33
4.3.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-33
4.3.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-38
4.3.3	Environmental Consequences for the No Action Alternative .....	4-38
4.4	Safety .....	4-39
4.4.1	Affected Environment .....	4-39
4.4.1.1	Flight Safety .....	4-39
4.4.1.2	Bird/Animal Aircraft Strike Hazard .....	4-39

	4.4.1.3	Accident Potential Zones and Clear Zones .....	4-40
	4.4.1.4	Explosive Safety .....	4-40
	<b>4.4.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-40</b>
	4.4.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-42
	4.4.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-44
	<b>4.4.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-44</b>
<b>4.5</b>	<b>Land Use .....</b>		<b>4-44</b>
	<b>4.5.1</b>	<b>Affected Environment .....</b>	<b>4-44</b>
	4.5.1.1	NAF El Centro Land Use .....	4-44
	4.5.1.2	Local and Regional Land Use .....	4-49
	4.5.1.3	Land Use and the Noise Environment .....	4-52
	<b>4.5.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-52</b>
	4.5.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-52
	4.5.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-62
	<b>4.5.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-62</b>
<b>4.6</b>	<b>Infrastructure and Utilities.....</b>		<b>4-62</b>
	<b>4.6.1</b>	<b>Affected Environment .....</b>	<b>4-62</b>
	4.6.1.1	Water Supply .....	4-62
	4.6.1.2	Wastewater .....	4-63
	4.6.1.3	Stormwater.....	4-63
	4.6.1.4	Electricity .....	4-63
	4.6.1.5	Natural Gas.....	4-64
	4.6.1.6	Solid Waste.....	4-64
	<b>4.6.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-64</b>
	4.6.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-64
	4.6.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-69
	<b>4.6.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-69</b>
<b>4.7</b>	<b>Socioeconomics .....</b>		<b>4-69</b>
	<b>4.7.1</b>	<b>Affected Environment .....</b>	<b>4-69</b>
	4.7.1.1	Population .....	4-70
	4.7.1.2	Employment and Income .....	4-70
	4.7.1.3	Housing.....	4-72
	4.7.1.4	Environmental Justice .....	4-72
	4.7.1.5	Protection of Children .....	4-73
	<b>4.7.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-73</b>
	4.7.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-73
	4.7.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-78
	<b>4.7.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-80</b>
<b>4.8</b>	<b>Community Services .....</b>		<b>4-80</b>
	<b>4.8.1</b>	<b>Affected Environment .....</b>	<b>4-80</b>
	4.8.1.1	Schools and Childcare.....	4-80
	4.8.1.2	Police Protection .....	4-82

	4.8.1.3	Fire Protection .....	4-82
	4.8.1.4	Health Services .....	4-83
	4.8.1.5	Parks and Recreation .....	4-83
	4.8.1.6	Religious Services .....	4-84
	<b>4.8.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-84</b>
	4.8.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-84
	4.8.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-86
	<b>4.8.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-87</b>
<b>4.9</b>		<b>Ground Traffic and Transportation .....</b>	<b>4-87</b>
	<b>4.9.1</b>	<b>Affected Environment .....</b>	<b>4-87</b>
	4.9.1.1	Local and Regional Traffic Circulation .....	4-87
	4.9.1.2	Traffic Conditions at NAF El Centro .....	4-89
	4.9.1.3	Public Transit .....	4-89
	<b>4.9.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-90</b>
	4.9.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-90
	4.9.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-93
	<b>4.9.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-94</b>
<b>4.10</b>		<b>Biological Resources .....</b>	<b>4-94</b>
	<b>4.10.1</b>	<b>Affected Environment .....</b>	<b>4-94</b>
	4.10.1.1	Vegetation .....	4-94
	4.10.1.2	Wildlife .....	4-96
	4.10.1.3	Special-Status Species .....	4-98
	<b>4.10.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-98</b>
	4.10.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-98
	4.10.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-104
	<b>4.10.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-104</b>
<b>4.11</b>		<b>Topography and Soils.....</b>	<b>4-104</b>
	<b>4.11.1</b>	<b>Affected Environment .....</b>	<b>4-104</b>
	<b>4.11.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-105</b>
	4.11.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-106
	4.11.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-106
	<b>4.11.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>4-106</b>
<b>4.12</b>		<b>Water Resources.....</b>	<b>4-107</b>
	<b>4.12.1</b>	<b>Affected Environment .....</b>	<b>4-107</b>
	4.12.1.1	Surface Water.....	4-107
	4.12.1.2	Groundwater .....	4-109
	4.12.1.3	Water Quality .....	4-109
	4.12.1.4	Wetlands .....	4-110
	4.12.1.5	Floodplains .....	4-110
	<b>4.12.2</b>	<b>Environmental Consequences for Alternative 1.....</b>	<b>4-111</b>
	4.12.2.1	Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-111
	4.12.2.2	Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-113

	<b>4.12.3 Environmental Consequences for the No Action Alternative .....</b>	<b>4-113</b>
<b>4.13</b>	<b>Cultural and Traditional Resources .....</b>	<b>4-113</b>
	<b>4.13.1 Affected Environment .....</b>	<b>4-113</b>
	4.13.1.1 Architectural Resources.....	4-113
	4.13.1.2 Archaeological Resources.....	4-114
	4.13.1.3 Traditional Cultural Properties .....	4-115
	<b>4.13.2 Environmental Consequences for Alternative 1.....</b>	<b>4-116</b>
	4.13.2.1 Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-116
	4.13.2.2 Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-118
	<b>4.13.3 Environmental Consequences for the No Action Alternative .....</b>	<b>4-118</b>
<b>4.14</b>	<b>Hazardous Materials and Waste .....</b>	<b>4-118</b>
	<b>4.14.1 Affected Environment .....</b>	<b>4-118</b>
	4.14.1.1 Hazardous Materials Management .....	4-118
	4.14.1.2 Hazardous Waste Management .....	4-120
	4.14.1.3 Pollution Prevention .....	4-121
	4.14.1.4 Contaminated Sites .....	4-121
	<b>4.14.2 Environmental Consequences for Alternative 1.....</b>	<b>4-125</b>
	4.14.2.1 Alternative 1 – NAF El Centro Homebasing, Effects at NAF El Centro .....	4-125
	4.14.2.2 Alternative 1 – NAF El Centro Homebasing, Effects at NAS Lemoore .....	4-131
	<b>4.14.3 Environmental Consequences for the No Action Alternative .....</b>	<b>4-131</b>
<b>5.</b>	<b>ALTERNATIVE 2 – NAS LEMOORE HOMEBASING.....</b>	<b>5-1</b>
<b>5.1</b>	<b>Airfields and Airspace .....</b>	<b>5-1</b>
	<b>5.1.1 Affected Environment .....</b>	<b>5-1</b>
	5.1.1.1 Airfield Operations .....	5-1
	5.1.1.2 Special Use Airspace and Military Training Routes .....	5-1
	<b>5.1.2 Environmental Consequences for Alternative 2.....</b>	<b>5-4</b>
	5.1.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-4
	5.1.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-8
	<b>5.1.3 Environmental Consequences for the No Action Alternative .....</b>	<b>5-9</b>
<b>5.2</b>	<b>Noise .....</b>	<b>5-9</b>
	<b>5.2.1 Affected Environment .....</b>	<b>5-9</b>
	5.2.1.1 Airfield Operations .....	5-9
	5.2.1.2 Special Use Airspace and Military Training Routes .....	5-15
	<b>5.2.2 Environmental Consequences for Alternative 2.....</b>	<b>5-15</b>
	5.2.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-15
	5.2.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-23
	<b>5.2.3 Environmental Consequences for the No Action Alternative .....</b>	<b>5-27</b>
<b>5.3</b>	<b>Air Quality .....</b>	<b>5-27</b>
	<b>5.3.1 Affected Environment .....</b>	<b>5-28</b>
	<b>5.3.2 Environmental Consequences for Alternative 2.....</b>	<b>5-29</b>
	5.3.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-30
	5.3.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-33

	<b>5.3.3 Environmental Consequences for the No Action Alternative .....</b>	<b>5-35</b>
<b>5.4</b>	<b>Safety .....</b>	<b>5-35</b>
	<b>5.4.1 Affected Environment .....</b>	<b>5-35</b>
	5.4.1.1 Flight Safety .....	5-35
	5.4.1.2 Bird/Animal Aircraft Strike Hazard .....	5-36
	5.4.1.3 Accident Potential Zones and Clear Zones .....	5-36
	5.4.1.4 Explosive Safety .....	5-38
	<b>5.4.2 Environmental Consequences for Alternative 2.....</b>	<b>5-38</b>
	5.4.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-38
	5.4.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-40
	<b>5.4.3 Environmental Consequences for the No Action Alternative .....</b>	<b>5-40</b>
<b>5.5</b>	<b>Land Use .....</b>	<b>5-40</b>
	<b>5.5.1 Affected Environment .....</b>	<b>5-40</b>
	5.5.1.1 NAS Lemoore Land Use .....	5-40
	5.5.1.2 Local and Regional Land Use .....	5-44
	5.5.1.3 Land Use and the Noise Environment .....	5-46
	<b>5.5.2 Environmental Consequences for Alternative 2.....</b>	<b>5-50</b>
	5.5.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-50
	5.5.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-53
	<b>5.5.3 Environmental Consequences for the No Action Alternative .....</b>	<b>5-53</b>
<b>5.6</b>	<b>Infrastructure and Utilities.....</b>	<b>5-57</b>
	<b>5.6.1 Affected Environment .....</b>	<b>5-57</b>
	5.6.1.1 Water Supply .....	5-57
	5.6.1.2 Wastewater .....	5-58
	5.6.1.3 Stormwater.....	5-59
	5.6.1.4 Electricity .....	5-59
	5.6.1.5 Natural Gas.....	5-60
	5.6.1.6 Solid Waste.....	5-60
	<b>5.6.2 Environmental Consequences for Alternative 2.....</b>	<b>5-60</b>
	5.6.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-60
	5.6.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-66
	<b>5.6.3 Environmental Consequences for the No Action Alternative .....</b>	<b>5-66</b>
<b>5.7</b>	<b>Socioeconomics .....</b>	<b>5-66</b>
	<b>5.7.1 Affected Environment .....</b>	<b>5-66</b>
	5.7.1.1 Population .....	5-66
	5.7.1.2 Employment and Income .....	5-67
	5.7.1.3 Housing.....	5-68
	5.7.1.4 Environmental Justice .....	5-69
	5.7.1.5 Protection of Children .....	5-70
	<b>5.7.2 Environmental Consequences for Alternative 2.....</b>	<b>5-70</b>
	5.7.2.1 Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-71
	5.7.2.2 Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-75

	<b>5.7.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-75</b>
<b>5.8</b>		<b>Community Services .....</b>	<b>5-75</b>
	<b>5.8.1</b>	<b>Affected Environment .....</b>	<b>5-75</b>
	5.8.1.1	Schools and Childcare.....	5-76
	5.8.1.2	Police Protection .....	5-78
	5.8.1.3	Fire Protection .....	5-79
	5.8.1.4	Health Services .....	5-79
	5.8.1.5	Parks and Recreation .....	5-79
	5.8.1.6	Religious Services .....	5-80
	<b>5.8.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-80</b>
	5.8.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-80
	5.8.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-82
	<b>5.8.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-82</b>
<b>5.9</b>		<b>Ground Traffic and Transportation .....</b>	<b>5-82</b>
	<b>5.9.1</b>	<b>Affected Environment .....</b>	<b>5-82</b>
	5.9.1.1	Local and Regional Traffic Circulation .....	5-82
	5.9.1.2	Public Transit .....	5-83
	<b>5.9.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-85</b>
	5.9.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-85
	5.9.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-86
	<b>5.9.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-86</b>
<b>5.10</b>		<b>Biological Resources .....</b>	<b>5-87</b>
	<b>5.10.1</b>	<b>Affected Environment .....</b>	<b>5-87</b>
	5.10.1.1	Vegetation .....	5-87
	5.10.1.2	Wildlife .....	5-89
	5.10.1.3	Special-Status Species .....	5-92
	<b>5.10.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-94</b>
	5.10.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-94
	5.10.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-99
	<b>5.10.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-99</b>
<b>5.11</b>		<b>Topography and Soils.....</b>	<b>5-99</b>
	<b>5.11.1</b>	<b>Affected Environment .....</b>	<b>5-99</b>
	<b>5.11.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-100</b>
	5.11.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-100
	5.11.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-101
	<b>5.11.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-101</b>
<b>5.12</b>		<b>Water Resources.....</b>	<b>5-101</b>
	<b>5.12.1</b>	<b>Affected Environment .....</b>	<b>5-101</b>
	5.12.1.1	Surface Water.....	5-101
	5.12.1.2	Groundwater .....	5-102
	5.12.1.3	Water Quality .....	5-104
	5.12.1.4	Wetlands .....	5-104



5.12.1.5	Floodplains .....	5-106
<b>5.12.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-106</b>
5.12.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-106
5.12.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-108
<b>5.12.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-108</b>
<b>5.13</b>	<b>Cultural and Traditional Resources .....</b>	<b>5-108</b>
<b>5.13.1</b>	<b>Affected Environment .....</b>	<b>5-108</b>
5.13.1.1	Architectural Resources.....	5-108
5.13.1.2	Archaeological Resources.....	5-109
5.13.1.3	Traditional Cultural Properties .....	5-110
<b>5.13.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-110</b>
5.13.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-111
5.13.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-112
<b>5.13.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-112</b>
<b>5.14</b>	<b>Hazardous Materials and Waste .....</b>	<b>5-112</b>
<b>5.14.1</b>	<b>Affected Environment .....</b>	<b>5-112</b>
5.14.1.1	Hazardous Materials Management .....	5-112
5.14.1.2	Hazardous Waste Management .....	5-114
5.14.1.3	Pollution Prevention .....	5-115
5.14.1.4	Contaminated Sites .....	5-116
<b>5.14.2</b>	<b>Environmental Consequences for Alternative 2.....</b>	<b>5-118</b>
5.14.2.1	Alternative 2 – NAS Lemoore Homebasing, Effects at NAS Lemoore.....	5-118
5.14.2.2	Alternative 2 – NAS Lemoore Homebasing, Effects at NAF El Centro .....	5-123
<b>5.14.3</b>	<b>Environmental Consequences for the No Action Alternative .....</b>	<b>5-125</b>
<b>6.</b>	<b>CUMULATIVE IMPACTS FOR ALTERNATIVE 1 – NAF EL CENTRO HOMEBASING.....</b>	<b>6-1</b>
<b>6.1</b>	<b>Past, Present, and Reasonably Foreseeable Future Actions .....</b>	<b>6-1</b>
6.1.1	Past Actions Relevant to Alternative 1 - NAF El Centro Homebasing .....	6-2
6.1.2	Present Actions Relevant to Alternative 1 - NAF El Centro Homebasing .....	6-2
6.1.3	Reasonably Foreseeable Future Actions Relevant to Alternative 1 - NAF El Centro Homebasing .....	6-4
<b>6.2</b>	<b>Cumulative Impacts Analysis for Alternative 1 – NAF El Centro Homebasing .....</b>	<b>6-10</b>
6.2.1	Airfields and Airspace – Potential Cumulative Impacts for Alternative 1 .....	6-11
6.2.2	Noise – Potential Cumulative Impacts for Alternative 1 .....	6-14
6.2.3	Air Quality – Potential Cumulative Impacts for Alternative 1 .....	6-14
6.2.4	Safety – Potential Cumulative Impacts for Alternative 1 .....	6-20
6.2.5	Land Use – Potential Cumulative Impacts for Alternative 1 .....	6-21
6.2.6	Infrastructure and Utilities – Potential Cumulative Impacts for Alternative 1.....	6-24
6.2.7	Socioeconomics – Potential Cumulative Impacts for Alternative 1 .....	6-27
6.2.8	Community Services – Potential Cumulative Impacts for Alternative 1 .....	6-29
6.2.9	Ground Traffic and Transportation – Potential Cumulative Impacts for Alternative 1.....	6-31
6.2.10	Biological Resources – Potential Cumulative Impacts for Alternative 1 .....	6-33
6.2.11	Topography and Soils – Potential Cumulative Impacts for Alternative 1.....	6-35
6.2.12	Water Resources – Potential Cumulative Impacts for Alternative 1.....	6-36

6.2.13	Cultural and Traditional Resources – Potential Cumulative Impacts for Alternative 1.....	6-38
6.2.14	Hazardous Materials and Waste – Potential Cumulative Impacts for Alternative 1 .....	6-39
7.	CUMULATIVE IMPACTS FOR ALTERNATIVE 2 – NAS LEMOORE HOMEBASING .....	7-1
7.1	Past, Present, and Reasonably Foreseeable Future Actions .....	7-1
7.1.1	Past Actions Relevant to Alternative 2 – NAS Lemoore Homebasing .....	7-3
7.1.2	Present Actions Relevant to Alternative 2 – NAS Lemoore Homebasing .....	7-3
7.1.3	Reasonably Foreseeable Future Actions Relevant to Alternative 2 – NAS Lemoore Homebasing.....	7-4
7.2	Cumulative Impacts Analysis for Alternative 2-NAS Lemoore Homebasing.....	7-7
7.2.1	Airfields and Airspace – Potential Cumulative Impacts for Alternative 2 .....	7-8
7.2.2	Noise – Potential Cumulative Impacts for Alternative 2 .....	7-9
7.2.3	Air Quality – Potential Cumulative Impacts for Alternative 2 .....	7-10
7.2.4	Safety – Potential Cumulative Impacts for Alternative 2 .....	7-14
7.2.5	Land Use – Potential Cumulative Impacts for Alternative 2 .....	7-15
7.2.6	Infrastructure and Utilities – Potential Cumulative Impacts for Alternative 2.....	7-16
7.2.7	Socioeconomics – Potential Cumulative Impacts for Alternative 2 .....	7-17
7.2.8	Community Services – Potential Cumulative Impacts for Alternative 2 .....	7-18
7.2.9	Ground Traffic and Transportation – Potential Cumulative Impacts for Alternative 2.....	7-20
7.2.10	Biological Resources – Potential Cumulative Impacts for Alternative 2 .....	7-21
7.2.11	Topography and Soils – Potential Cumulative Impacts for Alternative 2.....	7-23
7.2.12	Water Resources – Potential Cumulative Impacts for Alternative 2.....	7-23
7.2.13	Cultural and Traditional Resources – Potential Cumulative Impacts for Alternative 2.....	7-25
7.2.14	Hazardous Materials and Waste – Potential Cumulative Impacts for Alternative 2 .....	7-26
8.	OTHER CONSIDERATIONS REQUIRED BY NEPA .....	8-1
8.1	Consistency with Other Federal, State, and Local Plans, Policies, and Regulations .....	8-1
8.2	Unavoidable Adverse Impacts and Considerations that Offset these Impacts.....	8-3
8.2.1	Alternative 1 – NAF El Centro Homebasing .....	8-3
8.2.2	Alternative 2 – NAS Lemoore Homebasing .....	8-3
8.3	Relationships between Short-term Uses of the Environment and Enhancement of Long-term Productivity.....	8-3
8.4	Irreversible and Irretrievable Commitments of Resources .....	8-4
9.	REFERENCES .....	9-1
	References for Executive Summary .....	9-1
	References for Chapter 1 .....	9-1
	References for Chapter 2 .....	9-2
	References for Chapter 3 .....	9-3
	References for Chapter 4 .....	9-5
	References for Chapter 5 .....	9-14
	References for Chapter 6 .....	9-22
	References for Chapter 7 .....	9-24
	References for Chapter 8 .....	9-25
10.	LIST OF PREPARERS AND CONTRIBUTORS .....	10-1

## LIST OF FIGURES

Figure 1-1. Locations of NAF El Centro and NAS Lemoore .....	1-2
Figure 1-2. Comparison of FA-18C Hornet and F-35C Joint Strike Fighter .....	1-4
Figure 2-1. West Coast Aircraft Carrier Operating Area .....	2-7
Figure 2-2. Regional Location of NAF El Centro .....	2-10
Figure 2-3. Regional Location of NAS Lemoore .....	2-12
Figure 2-4. Proposed Areas of Construction and Demolition at NAF El Centro under Alternative 1 .....	2-18
Figure 2-5. Area 1 Conceptual View of Proposed Construction and Demolition at NAF El Centro under Alternative 1 .....	2-19
Figure 2-6. Area 2 Conceptual View of Proposed Construction and Demolition at NAF El Centro under Alternative 1 .....	2-20
Figure 2-7. Area 3 Conceptual View of Proposed Construction at NAF El Centro under Alternative 1 .....	2-21
Figure 2-8. Area 4 Conceptual View of Proposed Construction and Demolition at NAF El Centro under Alternative 1 .....	2-22
Figure 2-9. Area 5 Conceptual View of Proposed Construction at NAF El Centro under Alternative 1 .....	2-23
Figure 2-10. Potential Parcel Acquisition at NAF El Centro under Alternative 1 .....	2-24
Figure 2-11. SUA and MTRs Proposed for F-35C Operations in the Vicinity of NAF El Centro .....	2-28
Figure 2-12. Proposed Areas of Construction at NAS Lemoore under Alternative 2 .....	2-32
Figure 2-13. Area 1 Conceptual View of Proposed Construction at NAS Lemoore under Alternative 2 .....	2-33
Figure 2-14. Area 2 Conceptual View of Proposed Construction at NAS Lemoore under Alternative 2 .....	2-34
Figure 2-15. Area 3 Conceptual View of Proposed Construction at NAS Lemoore under Alternative 2 .....	2-35
Figure 2-16. Conceptual View of Proposed Construction at NAF El Centro under Alternative 2 .....	2-36
Figure 2-17. SUA and MTRs Proposed for F-35C Operations in the Vicinity of NAS Lemoore .....	2-39
Figure 3.1-1. Cross Section of Controlled and Uncontrolled Airspace Classes .....	3-4
Figure 3.2-1. A-Weighted Sound Levels from Typical Sources .....	3-7
Figure 4.1-1. NAF El Centro Vicinity Aeronautical Chart (Western) .....	4-5
Figure 4.1-2. NAF El Centro Vicinity Aeronautical Chart (Eastern) .....	4-6
Figure 4.2-1. Baseline Noise Contours and Points of Interest at NAF El Centro .....	4-13
Figure 4.2-2. Ranges of Noise Levels of Construction Equipment .....	4-15
Figure 4.2-3. Baseline and Proposed Noise Contours and Points of Interest at NAF El Centro under Alternative 1 .....	4-20
Figure 4.2-4. Baseline and Proposed Noise Contours and Points of Interest at NAS Lemoore under Alternative 1 .....	4-27
Figure 4.4-1. Existing Clear Zones, APZs, and ESQD Arcs at NAF El Centro .....	4-41
Figure 4.5-1. Existing Land Use at NAF El Centro and Seeley .....	4-45
Figure 4.5-2. Existing Land Use in the Vicinity of NAF El Centro .....	4-47
Figure 4.5-3. National Parks within the Vicinity of NAF El Centro Airspace .....	4-51
Figure 4.5-4. Baseline Noise Contours and Existing Land Use at NAF El Centro .....	4-53
Figure 4.5-5. Baseline Noise Contours and Existing Land Use in the Vicinity of NAF El Centro .....	4-54
Figure 4.5-6. Existing Land Use and Proposed Construction at NAF El Centro under Alternative 1 .....	4-55
Figure 4.5-7. Proposed Noise Contours and Existing Land Use at NAF El Centro under Alternative 1 .....	4-58
Figure 4.5-8. Proposed Noise Contours and Existing Land Use in the Vicinity of NAF El Centro under Alternative 1 .....	4-59
Figure 4.9-1. Local and Regional Traffic Circulation – NAF El Centro .....	4-88
Figure 4.10-1. Vegetation Types at NAF El Centro .....	4-95
Figure 4.10-2. Burrowing Owl Burrow Locations at NAF El Centro .....	4-97
Figure 4.10-3. Potential Impacts to Vegetation Types at NAF El Centro under Alternative 1 .....	4-100
Figure 4.10-4. Potential Impacts to Burrowing Owl Burrows at NAF El Centro under Alternative 1 .....	4-101
Figure 4.12-1. Major Surface Water Features at NAF El Centro .....	4-108
Figure 4.12-2. Major Surface Water Features at NAF El Centro in the Vicinity of Proposed Construction Areas under Alternative 1 .....	4-112

Figure 4.14-1. Installation Restoration and MMRP Sites at NAF El Centro .....	4-123
Figure 4.14-2. Installation Restoration and MMRP Sites within the Vicinity of Proposed Construction Activities at NAF El Centro under Alternative 1 .....	4-129
Figure 5.1-1. NAS Lemoore Vicinity Aeronautical Chart (Western) .....	5-5
Figure 5.1-2. NAS Lemoore Vicinity Aeronautical Chart (Eastern) .....	5-6
Figure 5.2-1. Baseline Noise Contours and Points of Interest at NAS Lemoore .....	5-12
Figure 5.2-2. Baseline and Proposed Noise Contours and Points of Interest at NAS Lemoore under Alternative 2 .....	5-18
Figure 5.2-3. Baseline and Proposed Noise Contours and Points of Interest at NAF El Centro under Alternative 2 .....	5-25
Figure 5.4-1. Existing Clear Zones, APZs and ESQD Arcs at NAS Lemoore .....	5-37
Figure 5.5-1. Existing Land Use at NAS Lemoore .....	5-42
Figure 5.5-2. National Parks within the Vicinity of NAS Lemoore Airspace .....	5-47
Figure 5.5-3. Baseline Noise Contours and Existing Land Use at NAS Lemoore .....	5-48
Figure 5.5-4. Baseline Noise Contours and Existing Land Use in the Vicinity of NAS Lemoore .....	5-49
Figure 5.5-5. Existing Land Use and Proposed Construction Areas at NAS Lemoore under Alternative 2 .....	5-51
Figure 5.5-6. Proposed Noise Contours and Existing Land Use at NAS Lemoore under Alternative 2 .....	5-54
Figure 5.5-7. Proposed Noise Contours and Existing Land Use in the Vicinity of NAS Lemoore under Alternative 2 .....	5-55
Figure 5.9-1. Local and Regional Traffic Circulation – NAS Lemoore .....	5-84
Figure 5.10-1. Vegetation Types at NAS Lemoore .....	5-88
Figure 5.10-2. Occurrence of Kangaroo Rats, Spadefoot Toad, and Burrowing Owl Burrows at NAS Lemoore .....	5-91
Figure 5.10-3. Potential Impacts to Vegetation Types at NAS Lemoore under Alternative 2 .....	5-95
Figure 5.10-4. Potential Impacts to Kangaroo Rats, Spadefoot Toad, and Burrowing Owl Burrows at NAS Lemoore under Alternative 2 .....	5-96
Figure 5.12-1. Major Surface Water Features at NAS Lemoore .....	5-103
Figure 5.12-2. Major Surface Water Features at NAS Lemoore in the Vicinity of Proposed Construction Areas under Alternative 2 .....	5-107
Figure 5.14-1. Installation Restoration and MMRP Sites at NAS Lemoore .....	5-119
Figure 5.14-2. Installation Restoration and MMRP Sites within the Vicinity of Proposed Construction Activities at NAS Lemoore under Alternative 2 .....	5-124
Figure 6.1-1. Cumulative Impact Project Locations – NAF El Centro .....	6-3
Figure 7.1-1. Cumulative Impact Project Locations – NAS Lemoore .....	7-2

## LIST OF TABLES

Table ES-1. Changes in Annual Airfield Operations at NAF El Centro and NAS Lemoore under Alternative 1 .....	ES-4
Table ES-2. Changes in Annual Operations in Special Use Airspace under Alternative 1 .....	ES-4
Table ES-3. Changes in Annual Operations in Military Training Routes under Alternative 1 .....	ES-5
Table ES-4. Changes in Annual Airfield Operations at NAS Lemoore and NAF El Centro under Alternative 2 .....	ES-7
Table ES-5. Changes in Annual Operations in Special Use Airspace under Alternative 2 .....	ES-7
Table ES-6. Changes in Annual Operations in Military Training Routes under Alternative 2 .....	ES-7
Table ES-7. Summary of Potential Environmental Effects at NAF El Centro and NAS Lemoore .....	ES-11
Table 1.3-1. Newspaper Display Advertisement Publication Dates .....	1-6
Table 1.3-2. Scoping Meeting Schedule, Locations, and Number of Attendees .....	1-7
Table 1.3-3. Summary of Public Scoping Comments .....	1-8
Table 2.1-1. Military Personnel Required to Support F-35C Squadrons .....	2-4
Table 2.3-1. Level 2 Screening Factors .....	2-8
Table 2.3-2. Level 3 Screening Factors .....	2-8
Table 2.6-1. Comparison of Alternatives 1 and 2 .....	2-13
Table 2.7-1. Aircraft Loading Changes at NAF El Centro and NAS Lemoore under Alternative 1 .....	2-14
Table 2.7-2. Proposed Construction at NAF El Centro under Alternative 1 .....	2-15
Table 2.7-3. Proposed Demolition at NAF El Centro under Alternative 1 .....	2-16
Table 2.7-4. Personnel Changes at NAF El Centro and NAS Lemoore under Alternative 1 .....	2-25
Table 2.7-5. Changes in Annual Airfield Operations at NAF El Centro and NAS Lemoore under Alternative 1 .....	2-26
Table 2.7-6. Changes in Annual Operations in Special Use Airspace under Alternative 1 .....	2-27
Table 2.7-7. Changes in Annual Operations in Military Training Routes under Alternative 1 .....	2-29
Table 2.8-1. Aircraft Loading Changes at NAS Lemoore under Alternative 2 .....	2-30
Table 2.8-2. Proposed Construction at NAS Lemoore and NAF El Centro under Alternative 2 .....	2-31
Table 2.8-3. Personnel Changes at NAS Lemoore under Alternative 2 .....	2-37
Table 2.8-4. Changes in Annual Airfield Operations at NAS Lemoore and NAF El Centro under Alternative 2 .....	2-38
Table 2.8-5. Changes in Annual Operations in Special Use Airspace under Alternative 2 .....	2-40
Table 2.8-6. Changes in Annual Operations in Military Training Routes under Alternative 2 .....	2-40
Table 3.2-1. Subjective Responses to Changes in A-Weighted Decibels .....	3-6
Table 3.3-1. Ambient Air Quality Standards .....	3-14
Table 4.1-1. Altitudes of Special Use Airspace in the Vicinity of NAF El Centro Proposed for Use by F-35C .....	4-2
Table 4.1-2. Changes in Annual Airfield Operations at NAF El Centro under Alternative 1 .....	4-4
Table 4.1-3. Changes in Annual Operations in Special Use Airspace under Alternative 1 .....	4-7
Table 4.1-4. Changes in Annual Operations in Military Training Routes under Alternative 1 .....	4-8
Table 4.1-5. Changes in Annual Airfield Operations at NAS Lemoore under Alternative 1 .....	4-10
Table 4.2-1. Baseline NAF El Centro Airfield Operations for Day, Evening, and Night (2015) .....	4-11
Table 4.2-2. Noise Exposure within Baseline Noise Zones at NAF El Centro (2015) .....	4-11
Table 4.2-3. CNEL at Various Points of Interest – Baseline (2015) .....	4-11
Table 4.2-4. Baseline Indoor Speech Interference Events at Representative NAF El Centro Locations (2015) .....	4-12
Table 4.2-5. Baseline Classroom Criteria for Schools near or on NAF El Centro (2015) .....	4-14
Table 4.2-6. Baseline Indoor Sleep Disturbance at Representative Locations Near NAF El Centro (2015) .....	4-14
Table 4.2-7. Representative Noise Levels for FA-18 Aircraft in Level Flight within MTRs .....	4-16
Table 4.2-8. Proposed NAF El Centro Airfield Operations under Alternative 1 (2028) .....	4-17
Table 4.2-9. Sound Exposure Levels and Maximum Sound Levels for Representative Flight Conditions of Primary Aircraft at NAF El Centro .....	4-18
Table 4.2-10. CNEL Noise Exposure within Baseline and Proposed Noise Zones at NAF El Centro .....	4-19
Table 4.2-11. CNEL Levels at Various Points of Interest – Baseline and Proposed .....	4-19
Table 4.2-12. Baseline and Proposed Average NIPTS and 10 <sup>th</sup> Percentile Noise Induced Permanent Threshold Shift (NIPTS) as a Function of L <sub>eq</sub> (24) .....	4-21
Table 4.2-13. Proposed Indoor Speech Interference at Representative NAF El Centro Locations (2028) .....	4-22
Table 4.2-14. Proposed Classroom Criteria for Schools near or on NAF El Centro (2028) .....	4-22

Table 4.2-15. Proposed Indoor Sleep Disturbance at Representative Locations near NAF El Centro .....	4-23
Table 4.2-16. Representative Noise Levels for FA-18 and F-35C Aircraft in Level Flight within MTRs .....	4-24
Table 4.2-17. Proposed NAS Lemoore Airfield Operations under Alternative 1 (2028) .....	4-25
Table 4.2-18. Noise Exposure within Baseline and Proposed Noise Zones at NAS Lemoore under Alternative 1 .....	4-26
Table 4.2-19. CNEL Levels at Various Points of Interest – Baseline and Proposed under Alternative 1 .....	4-26
Table 4.2-20. Proposed Indoor Speech Interference at Representative Locations at NAS Lemoore under Alternative 1 (2028) .....	4-28
Table 4.2-21. Baseline and Proposed Classroom Criteria for Schools near or on NAS Lemoore under Alternative 1 .....	4-28
Table 4.2-22. Proposed Indoor Sleep Disturbance at Representative Locations near NAS Lemoore under Alternative 1 .....	4-29
Table 4.3-1. Applicable General Conformity Rule de minimis Levels (tons/year) .....	4-32
Table 4.3-2. Baseline Mobile Source Emissions at NAF El Centro .....	4-32
Table 4.3-3. Baseline Stationary Source Air Emissions at NAF El Centro .....	4-33
Table 4.3-4. Estimated Annual Emissions at NAF El Centro under Alternative 1 .....	4-36
Table 4.3-5. Annual Conformity-Related Airfield Operation Emissions within the Imperial County APCD under Alternative 1 .....	4-37
Table 4.3-6. Estimated Total Emissions at NAS Lemoore under Alternative 1 .....	4-38
Table 4.5-1. Baseline and Proposed Acreages for NAF El Centro Land Use Noise Compatibility under Alternative 1 .....	4-60
Table 4.5-2. Baseline and Proposed Acreages for Regional Land Use Noise Compatibility under Alternative 1 .....	4-61
Table 4.7-1. Study Area Population Trends .....	4-70
Table 4.7-2. Study Area Employment, 2011 .....	4-70
Table 4.7-3. Study Area Personal and Per Capita Income .....	4-71
Table 4.7-4. Study Area Unemployment Rates .....	4-71
Table 4.7-5. Study Area Housing Units, 2010 .....	4-72
Table 4.7-6. Minority and Low-Income Population .....	4-73
Table 4.7-7. Percent under the Age of 18, 2010 .....	4-73
Table 4.7-8. Employment and Income Impacts Associated with Military Construction Projects at NAF El Centro under Alternative 1 .....	4-75
Table 4.7-9. Baseline and Proposed Minority and Low-Income Populations Underlying NAF El Centro Aircraft Noise Zones under Alternative 1 .....	4-76
Table 4.7-10. Population Under the Age of 18 Underlying NAF El Centro Aircraft Noise Zones under Alternative 1 .....	4-77
Table 4.8-1. Capacity and Available Space in Schools Serving the NAF El Centro Region .....	4-80
Table 4.9-1. 2011 Existing Conditions - Intersection Level of Service .....	4-89
Table 4.9-2. Baseline and Proposed Traffic Conditions under Alternative 1 .....	4-91
Table 4.10-1. Vegetation Types on NAF El Centro .....	4-94
Table 4.10-2. Potential Impacts to Vegetation at NAF El Centro under Alternative 1 .....	4-99
Table 4.10-3. Changes in Exposure of Burrowing Owl Burrows within NAF El Centro Airfield Noise Contours under Alternative 1 .....	4-102
Table 4.11-1. Soil Types Located within NAF El Centro .....	4-105
Table 4.13-1. Buildings and Structures to be Demolished under Alternative 1 .....	4-114
Table 4.13-2. Archaeological Resources at NAF El Centro .....	4-115
Table 4.14-1. Installation Restoration Sites within the Project Area at NAF El Centro .....	4-124
Table 5.1-1. Lemoore MOA/ATCAA Floor and Ceiling Altitudes .....	5-3
Table 5.1-2. Hunter MOA Floor and Ceiling Altitudes .....	5-3
Table 5.1-3. Changes in Annual Airfield Operations at NAS Lemoore under Alternative 2 .....	5-4
Table 5.1-4. Changes in Annual Operations in Special Use Airspace under Alternative 2 .....	5-7
Table 5.1-5. Changes in Annual Operations in Military Training Routes under Alternative 2 .....	5-7
Table 5.1-6. Changes in Annual Airfield Operations at NAF El Centro under Alternative 2 .....	5-9

Table 5.2-1. Baseline NAS Lemoore Airfield Operations for Day, Evening, and Night (2015) .....	5-10
Table 5.2-2. Noise Exposure within Baseline Noise Zones at NAS Lemoore (2015) .....	5-11
Table 5.2-3. CNEL Levels at Various Points of Interest – Baseline (2015).....	5-11
Table 5.2-4. Baseline Indoor Speech Interference Events at Representative Locations at NAS Lemoore (2015) ....	5-13
Table 5.2-5. Baseline Classroom Criteria for Schools near or on NAS Lemoore (2015).....	5-14
Table 5.2-6. Baseline Indoor Sleep Disturbance at Representative Locations Near NAS Lemoore (2015) .....	5-14
Table 5.2-7. Proposed NAS Lemoore Airfield Operations under Alternative 2 (2028) .....	5-16
Table 5.2-8. Sound Exposure Levels and Maximum Sound Levels for Representative Flight Conditions of Primary Aircraft at NAS Lemoore under Alternative 2.....	5-17
Table 5.2-9. Baseline and Proposed Noise Exposure within Noise Zones at NAS Lemoore under Alternative 2 .....	5-19
Table 5.2-10. CNEL Levels at Various Points of Interest – Baseline and Proposed Under Alternative 2 .....	5-19
Table 5.2-11. Proposed Indoor Speech Interference at Representative Locations at NAS Lemoore under Alternative 2 (2028) .....	5-20
Table 5.2-12. Baseline and Proposed Classroom Criteria for Schools near or on NAS Lemoore under Alternative 2.....	5-21
Table 5.2-13. Proposed Indoor Sleep Disturbance at Representative Locations Near NAS Lemoore .....	5-22
Table 5.2-14. Proposed NAF El Centro Airfield Operations under Alternative 2 (2028).....	5-23
Table 5.2-15. Baseline and Proposed Noise Exposure within Noise Zones at NAF El Centro under Alternative 2.....	5-24
Table 5.2-16. CNEL Levels at Various Points of Interest – Baseline and Proposed under Alternative 2.....	5-24
Table 5.2-17. Proposed Indoor Speech Interference at Representative Locations at NAF El Centro under Alternative 2 (2028) .....	5-26
Table 5.2-18. Proposed Classroom Criteria for Schools near or on NAF El Centro under Alternative 2 (2028) .....	5-26
Table 5.2-19. Proposed Indoor Sleep Disturbance at Representative Locations near NAF El Centro under Alternative 2.....	5-27
Table 5.3-1. Applicable General Conformity Rule de minimis Levels (tons/year) .....	5-29
Table 5.3-2. Baseline Mobile Source Emissions at NAS Lemoore.....	5-29
Table 5.3-3. Estimated Annual Emissions at NAS Lemoore Under Alternative 2 .....	5-31
Table 5.3-4. Annual Conformity-Related Airfield Operation Emissions within the San Joaquin Valley APCD under Alternative 2 .....	5-32
Table 5.3-5. Estimated Total Emissions at NAF El Centro under Alternative 2.....	5-34
Table 5.5-1. Baseline and Proposed Acreages for NAS Lemoore Land Use Noise Compatibility under Alternative 2.....	5-56
Table 5.5-2. Baseline and Proposed Acreages for Regional Land Use Noise Compatibility under Alternative 2 .....	5-56
Table 5.7-1. Study Area Population Trends .....	5-66
Table 5.7-2. Study Area Employment, 2011 .....	5-67
Table 5.7-3. Study Area Personal and Per Capita Income .....	5-68
Table 5.7-4. Study Area Unemployment Rates.....	5-68
Table 5.7-5. Study Area Housing Units, 2010 .....	5-69
Table 5.7-6. Minority and Low-Income Population .....	5-70
Table 5.7-7. Percent Under the Age of 18, 2010 .....	5-70
Table 5.7-8. Employment and Income Impacts Associated with Military Construction Projects at NAS Lemoore under Alternative 2.....	5-72
Table 5.7-9. Baseline and Proposed Minority and Low-Income Populations Underlying NAS Lemoore Aircraft Noise Zones under Alternative 2.....	5-74
Table 5.7-10. Population Under the Age of 18 Underlying NAS Lemoore Aircraft Noise Contour Bands under Alternative 2.....	5-75
Table 5.8-1. Capacity and Available Space in Schools Serving the NAS Lemoore Region Based on 2010-2011 Academic Year Enrollment .....	5-76
Table 5.9-1. State Route 198 Local Roadway Annual ADTs .....	5-83
Table 5.9-2. State Route 41 Local Roadway Annual ADTs .....	5-83
Table 5.10-1. Vegetation Types on NAS Lemoore .....	5-87

Table 5.10-2. Special-Status Species and California Species of Concern Known to Occur, or Potentially Occurring, at NAS Lemoore .....	5-93
Table 5.11-1. Soil Types Located within NAS Lemoore.....	5-99
Table 5.13-1. Archaeological Resources at NAS Lemoore .....	5-110
Table 5.14-1. Installation Restoration Sites within the Project Area at NAS Lemoore.....	5-116
Table 6.1-1. Other Actions Relevant to Cumulative Impacts Analysis.....	6-1
Table 6.1-2. Planned Residential and Commercial Developments in Southern Imperial County.....	6-7
Table 6.2-1. Summary of Projects and Resources for Cumulative Impacts Analysis at NAF El Centro.....	6-11
Table 6.2-2. US Marine Corps F-35B West Coast Basing, Changes in Annual Operations in SUA .....	6-12
Table 6.2-3. West Coast Basing of the MV-22, Changes in Annual Operations in SUA .....	6-12
Table 6.2-4. Changes in Annual Operations in Special Use Airspace under Alternative 1.....	6-13
Table 6.2-5. NAF El Centro 2028 GHG Emissions Compared to Baseline (2015) .....	6-18
Table 6.2-6. Comparison of Baseline, Alternative 1, and Alternative 2 GHG Emissions at NAF El Centro to United States 2010 Greenhouse Gas Emissions.....	6-18
Table 7.1-1. Other Actions Relevant to Cumulative Impacts Analysis.....	7-1
Table 7.2-1. Summary of Projects and Resources for Cumulative Impacts Analysis at NAS Lemoore .....	7-7
Table 7.2-2. NAS Lemoore 2028 GHG Emissions Compared to Baseline (2015) .....	7-12
Table 7.2-3. Comparison of Existing, Alternative 1, and Alternative 2 GHG Emissions at NAS Lemoore to United States 2010 Greenhouse Gas Emissions.....	7-12
Table 8.1-1. Summary of Applicable Environmental Regulations and Regulatory Compliance .....	8-1



## ACRONYMS AND ABBREVIATIONS

ADT	average daily traffic	EIS	Environmental Impact Statement
AESO	Aircraft Environmental Support Office	EO	Executive Order
AFE	above field elevation	ESA	Endangered Species Act
AGL	above ground level	ESQD	Explosive Safety Quantity Distance
AICUZ	Air Installations Compatible Use Zones	FAA	Federal Aviation Administration
APCD	Air Pollution Control District	FCLP	Field Carrier Landing Practice
APE	area of potential effects	FEMA	Federal Emergency Management Agency
APZ	Accident Potential Zone	FPPA	Farmland Protection Policy Act
AQMP	Air Quality Management Plan	FRS	Fleet Replacement Squadron
ATCAA	Air Traffic Controlled Assigned Airspace	ft	feet/foot
BASH	Bird/Animal Aircraft Strike Hazard	ft <sup>2</sup>	square feet
Bldg.	Building(s)	FY	fiscal year
BMP	Best Management Practice	GCA	Ground-controlled Approach
CAA	Clean Air Act	GHG	greenhouse gas
CalEEMod	California Emissions Estimator Model	GOV	government-owned vehicles
CARB	California Air Resources Board	GSE	ground support equipment
CCR	California Code of Regulations	GWP	global warming potential
CDFG	California Department of Fish and Game	HAP	hazardous air pollutant
CH <sub>4</sub>	methane	HARP	Historic and Archaeological Resources Protection
CEQ	Council on Environmental Quality	HRMA	Housing Requirement Market Analysis
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	Hz	hertz
C.F.R.	Code of Federal Regulations	IBWC	International Boundary and Water Commission
CNDDDB	California Natural Diversity Database	ICRMP	Integrated Cultural Resources Management Plan
CNEL	Community Noise Equivalent Level	IFR	Instrument Flight Rules
CNIC	Commander Navy Installations Command	INRMP	Integrated Natural Resources Management Plan
CO	carbon monoxide	JLUS	Joint Land Use Study
CO <sub>2</sub>	carbon dioxide	JP	jet propellant
CVN	nuclear-powered aircraft carrier	KART	Kings Area Rural Transit
CWA	Clean Water Act	kV	kilovolt
CY	construction year	LEED	Leadership in Energy and Environmental Design
DAR	Defense Access Road	Leq	Equivalent Sound Level
DASR	digital airport surveillance radar	L <sub>max</sub>	maximum sound level
dB	decibel	LOS	level of service
dba	A-weighted decibel	MBTA	Migratory Bird Treaty Act
DEIR	Draft Environmental Impact Report	MCAS	Marine Corps Air Station
DNL	day-night average sound level	mgd	million gallons per day
DoD	Department of Defense		
DoN	Department of the Navy		
EA	Environmental Assessment		

mg/l	milligrams per liter	PM <sub>10</sub>	particulate matter with a diameter less than 10 microns
MIA	Military Influence Area		
MMRP	Military Munitions Response Program	ppm	parts per million
MOA	Military Operations Area	PVC	polyvinyl chloride
MOU	Memorandum of Understanding	R-	Restricted Area
MSAT	Mobile Source Air Toxic	RCRA	Resource Conservation and Recovery Act
MSL	Mean Sea Level	ROD	Record of Decision
MTR	Military Training Route	SARA	Superfund Amendments and Reauthorization Act
NA	number of events above a threshold level	SEL	sound exposure level
NAAQS	National Ambient Air Quality Standards	SFO	simulated flameout
NAF	Naval Air Facility	SHPO	State Historic Preservation Office
NAS	Naval Air Station	SIP	State Implementation Plan
NASMOD	Military Aviation Simulation Model	SO <sub>2</sub>	sulfur dioxide
NAVFAC	Naval Facilities Engineering Command	SoCalGas	Southern California Gas Company
NAVSEA	Naval Sea Systems Command	SPCC	Spill Prevention Control and Countermeasures
NEPA	National Environmental Policy Act	SUA	Special Use Airspace
NGB	National Guard Bureau	SWPP	Stormwater Pollution Prevention
NHPA	National Historic Preservation Act	TCP	Traditional Cultural Property
NIOSH	National Institute for Occupational Safety and Health	TSCA	Toxic Substances Control Act
NIPTS	Noise Induced Permanent Threshold Shift	UFC	Unified Facilities Criteria
N <sub>2</sub> O	nitrous oxide	µg/m <sup>3</sup>	micrograms per cubic meter
NO <sub>2</sub>	nitrogen dioxide	US	United States
NO <sub>x</sub>	nitrogen oxide	U.S.C.	United States Code
NOI	Notice of Intent	USDOE	US Department of Energy
NPDES	National Pollutant Discharge Elimination System	USEPA	US Environmental Protection Agency
NRCS	Natural Resources Conservation Service	USFF	US Fleet Forces Command
NRHP	National Register of Historic Places	USFWS	US Fish and Wildlife Service
O <sub>3</sub>	ozone	USGS	US Geological Survey
OPNAVINST	Chief of Naval Operations Instruction	USMC	US Marine Corps
PCB	polychlorinated biphenyl	VFR	Visual Flight Rules
PG&E	Pacific Gas and Electric Company	VOC	volatile organic compound
PM <sub>2.5</sub>	particulate matter with a diameter of 2.5 microns or less	W-	Warning Area
		WAPA	Western Area Power Administration
		WWTP	wastewater treatment plant